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Volume XLVI MAY and JUNE, 1924 Number Five

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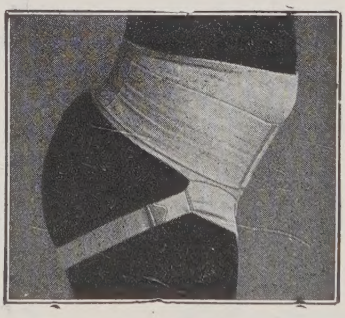

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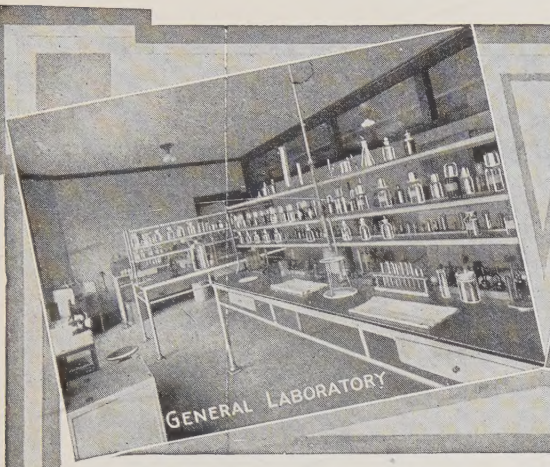

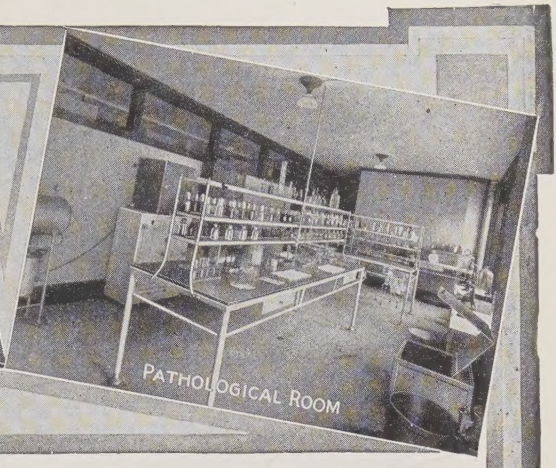

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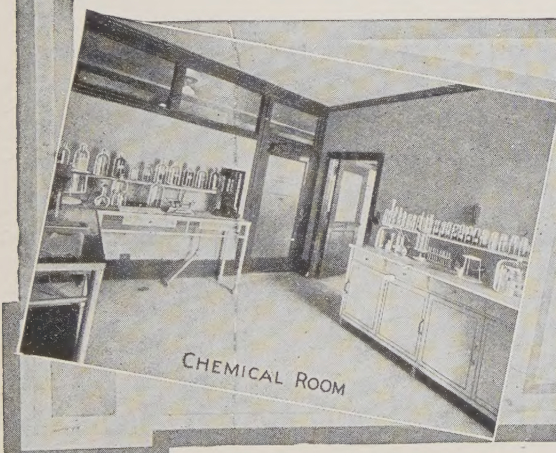

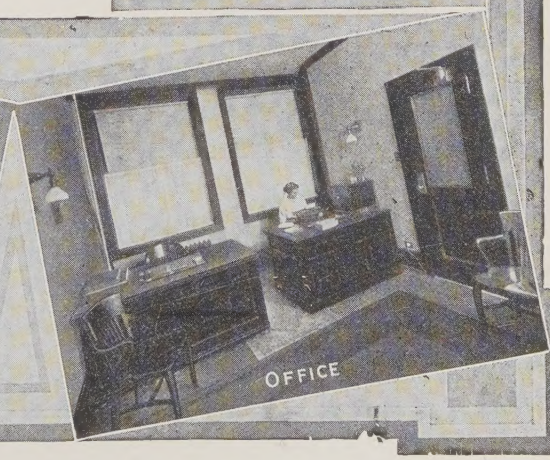

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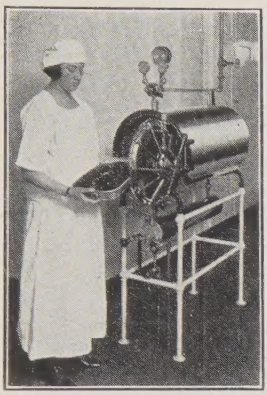

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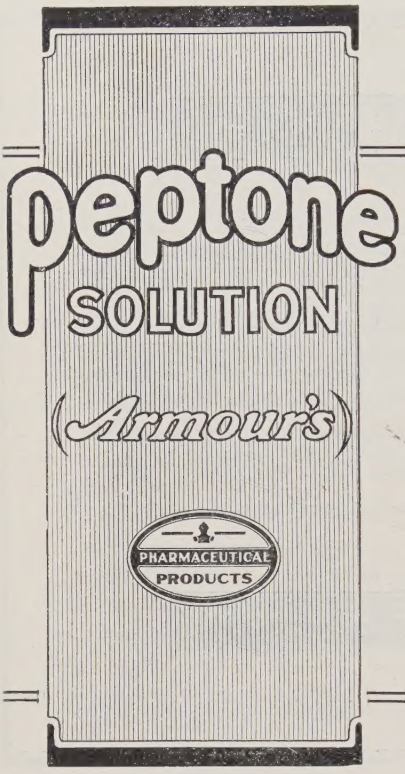

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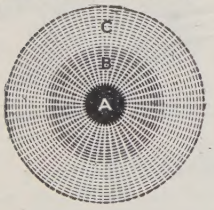

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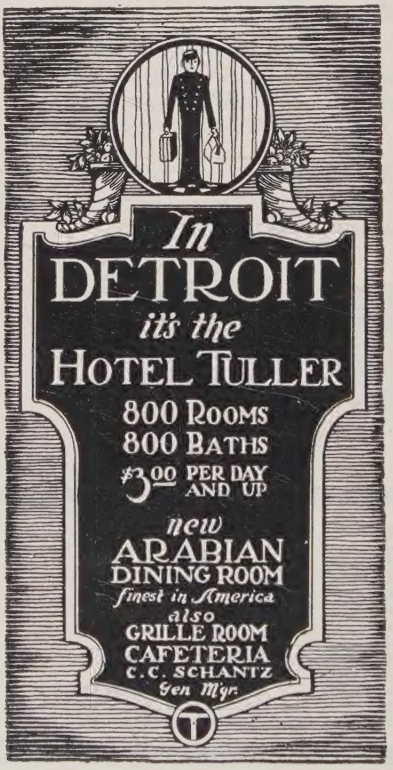

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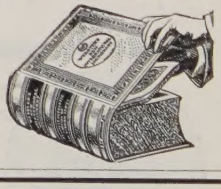

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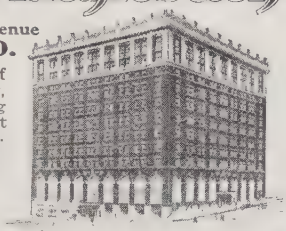

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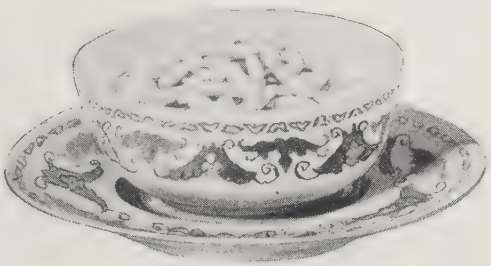

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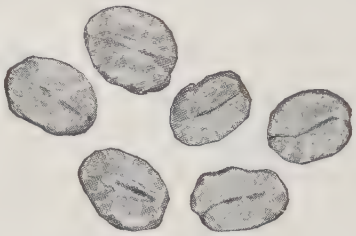

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Original Articles

PACIFISTS AND REDS*

By Lee Alexander Stone, M.D., Lt. Col., M. I., O. R. C. Member Executive Committee Theodore Roosevelt Post American Legion, Chicago, Ill.

The subject of my address, "Pacifists and Reds," may lead some into thinking that perhaps I am an alarmist. If you did not think this you would not be upholding America's reputation as a nation with its head in the clouds. A nation of false optimists who doubt the seriousness of the need for national defense and who absolutely refuse to accept the dogma of preparedness. America, because of the above stand, has become the camping ground of every type of propagandist. Its people resolutely oppose the statement that the nation is honey-combed with disloyalty, and that there are literally thousands of people living in and enjoying its freedom who daily engage in trying to devise means for the overthrow of its government.

This is not an idle statement made for the purpose of alarming. Rather is it intended to awaken a patriotic ardor in the hearts of men and women to whom the protection of their country should mean everything.

There are 410,000 Reds in Russia who control the destiny of 130,000,000 people. You already know what terror Bolshevism has struck in the heart of the world, with its Lenin and Trotzky as leaders. Trotzky is a product of the east side slums of New York and Brooklyn. It was there he first began to teach his doctrine that the bourgeoisie were inimical to the development of society and that the proletarian should rule. It was in New York and Switzerland that the horrors attendant upon a world revolution were first conceived. Two republican states. Free America has become a stamping ground for those who see only red and

*Memorial Day address delivered in Libertyville, Ill., May 30, 1924, before Community meeting held under auspices of the Libertyville Post American Legion.

who claim that the right of free speech granted by the Constitution gives them the right to teach the doctrines of communism. Russian soviets claim that there are 600,000 communists in the United States and I believe that they are not far wrong in making this statement. Think well over their statement—600,000 communists in the United States with a population of approximately 110,000,000, while in Russia, with a population of 130,000,000, there are only 410,000 mad individuals who rule with all the brutishness of the savage.

Of course I know that you will combat me by saying that a condition like that now existing in Russia could never exist here. Again do I accuse you of keeping your heads in the clouds and declare that unless you come out of your self-complacency and develop a spirit of *Nationalism* entirely free from entangling alliances, that what all Europe now fears with a fear that amounts to terror will visit itself upon you. We Americans are just as excitable as are the Latins, the only difference being that the Latins are carried away for a while with an idea and then drop it because of the national spirit of the country in which they live, finally emerging to guard only the interests of their native land. In other words, their national spirit is a part of their religion. If they make a treaty or engage in certain alliances or in diplomatic discussions, it is solely for the purpose of preserving their national entity.

Thus far, America's dreamers have been in control. When a practical person arises to protest and plead for certain fixed principles upon which all good government is based, he or she is hooted at as being an alarmist. All of the various discussions, diplomatic and otherwise, engaged in between the United States and foreign powers, unless we have gone to war, have proven futile because of our vaccilating national policies and lack of a fixed national platform upon which we might take a stand and thus demand the respect of the world.

The Congress of the United States, made up as it is of men from all walks of life, the majority of whom are untrained in statecraft, is at a disadvantage because of its *apparent* ignorance of the needs of the nation as a whole, confining itself to a Main Street policy.

If every senator and congressman could attend a school for statesmen, which would include world economics, world politics, international law, and last, but not least, where he could be taught something of the development of his own country, a real spirit of nationalism would develop. Many men are elected to Congress who never read seriously the Constitution of the United States nor any one of the many commentaries upon it.

In September, 1923, the President ordered me on duty as a soldier to attend the United States Army War College. It was at this college that I learned more about the advantages of our nation developing a national spirit than I ever learned before. Lecturers on various subjects relative to world politics, diplomacy, economics and national needs expounded a gospel that caused me to express to the Commandant, General

Ely, the regret I felt over the fact that only a few officers, one hundred in number, could attend. In expressing myself to General Pershing later in a letter, I stated that I regretted that there was no federal law that would compel the attendance of every member of Congress and of the Senate. The G 2 course, as it is called, is the one I attended. This course, while lasting only two months, is so packed with meat as to give a slant to the dangers of internationalism that it should be heard by every embryo statesman before he could qualify for the position he was elected to by the people. They elected him because they liked him personally and did not go into his qualifications for office, nor did they consider his adaptability to hold a position fraught with great responsibility.

The United States Army War College is one of the greatest schools in the world. Again I hear you say, "But the Army War College teaches militarism." This statement on your part is not true. It is a great peace making college. Military men in the United States are the world's greatest believers in peace—peace with honor.

That school of pacifism now being developed in this country by the Third International of Moscow, which is using many religious organizations as its tool, seeks to destroy patriotism, honor, and love of country with its flag whose glorious stars and stripes symbolize God, justice and freedom to those over whom it waves so majestically.

Russian propagandists with their red flag would promote a revolution in this country and put in power agencies whose whole scheme of life is woven on a warp of hatred and brutality and who would destroy those not in full accord with them, just as they have destroyed in Russia and in other European countries, and in Asia hundreds of thousands of lives of men and women who put honor and a belief in God and national ideals above physical destruction.

The communist denies the existence of God and decries religion as being a superstition. This statement is provable by a careful reading of the A. B. C. of communism which may be obtained at 1009 North State Street, Chicago, the headquarters of communism of the Middle West and West United States. From these headquarters there are spread thousands of pieces of communistic literature, much of which contains treasonable statements made by those in our midst who believe in the overthrow of our government and the establishment of a communistic state. With all of these statements derogatory to religion and a belief in God, Methodism has become honey-combed with their damnable teachings. The Presbyterian church and the Congregational also are badly tainted. Some Christian Scientists, too, lean toward the emulation of seditious practices which seek to do away with any type of protection that would guard against difficulty with a foreign foe. Nor do they believe in national defense. They refuse to put their stamp of approval on any measure that would save America for Americans. They (Methodists, Presbyterians, Congregationalists,

et al.) cry for peace at any cost and declare that if our country is invaded they will not raise a hand to protect it nor will they confer the church's blessing on those who enter its army. They state that a positive policy of non-resistance will receive sanction from God and that God will perform a miracle which will put this nation's foes to rout. They fail, however, to take into consideration the fact that that nation or those people who might choose to invade our borders might be worshippers of the same Jehovah before whose throne we bow and thus would expect His protection in like manner. God helps those who help themselves and performs miracles through the agency of science which is material.

It was claimed centuries ago, when hordes of children in Europe marched unarmed, singing the glory of God in the highest, into the land of the pagan, that God would perform a miracle and allow these helpless beings to obtain possession of the sacred city of Jerusalem and the tomb of Christ by making their bodies impervious to injury and disease. We all are familiar with what happened. Those children not destroyed by disease were taken into captivity by men of another faith, whose material possessions were guarded by soldiers with swords in their hands and sold into slavery. This boys' crusade gave the lie to a belief in a policy of non-resistance that has existed up to the present time.

A policy of non-resistance is always fatal to the country that assumes it. It is fostered by those who should be incarcerated in an insane hospital or in a prison for malcontents.

In 1861, this country was thrown into a civil war through the agency of two individuals who undoubtedly were mentally unbalanced. Harriet Beecher Stowe, a monomaniac, conceived Uncle Tom's Cabin, which became a torch in the hands of misguided patriots and zealots. John Brown, a maniac possessed of an hallucination that God was directing his work, killed those whom his mad brain imagined were working against him and his policies. His murderous band, under his command, committed atrocity after atrocity, believing they were doing God's will. Harriet Beecher Stowe and John Brown were the Reds of their day. I believe that most present-day historians are agreed that had they both been put away where they belonged, the Civil War would have been postponed indefinitely, if not permanently.

It can truthfully be said that two insane people brought about the Civil War with its awful toll in human life and property loss.

Let us beware lest such fanatics as Jane Addams, William Z. Foster, Eugene Debs, Carl Ruthenberg, Carrie Chapman Catt, Mary McDowell, Sherwood Eddy, Frederick J. Libby, Reverend Harry F. Ward, Northwestern's "38" and other slackers do not bewilder us with their pleas for national disarmament and non-resistance into becoming a nation of "jelly heads."

These followers of Lenin and Trotzky, many of them boasting of their friendship, while urging the complete disarmament of the United

States, never refer to the army of Russia with its strength of 13,000,000 nor have they ever been heard to urge that Russia disarm. They are seeking to subsidize the United States and make of it a second or third rate power. While possibly they have not actually signed the slacker's oath, they at least have heard it read and have tacitly acquiesced in it through failure to challenge it.

Jane Addams heads the Women's International League for Peace and Freedom. Recently this organization, made up as it is of pacifists and believers in non-resistance from all over the world, held a congress in Washington. Although many patriotic citizens protested against allowing this organization to spread its ideas of world peace and international alliances and complete disarmament of both Army and Navy of the United States, their pleas went unheeded. Beginning May 17th, 1924, over the protest of members of the American Legion, Dr. Burton, President of the University of Chicago, granted this Woman's International League for Peace and Freedom access to the University of Chicago to open a school of pacifism to run two weeks. Several of the faculty of the University spoke before this school. Rosika Schwimmer of Ford's peace ship fame and who was charged with being a spy during the World War is one of the prominent ones in attendance. This league was conceived in the brains of Schwimmer and Addams.

"The Women's International League for Peace," of which Miss Addams is the head, flagrantly advocates

Recognition of Soviet-Russia
Abolishment of Property Privileges (pure Communism)
Abolition of Army and Navy
Abolition of the National Guard
Repeal of the National Defense Act of 1920
Opposed to University and School Military Training
Wants Revision of School Text Books
Particularly anxious to abolish Gas and Chemical Warfare Division of the Army
Expresses friendship and sympathy for Germany
Believes "all wars are for capitalists"
Endorses the Youth Movement
Advocates Amnesty for all Political Prisoners

Advocates Pacifism both directly and indirectly; directly by its drive to abolish Army and Navy; indirectly by the so-called "Slackers' Oath," author Mrs. Harriet Connor Brown, a member of the League's Executive Committee. The oath reads as follows:

"Go to war, if you want to, but know this: We have pledged ourselves not to give you our children, not to encourage or nurse your soldiers, not to knit a sock, or roll a bandage, or drive a truck or make a war speech, or buy a bond."

Miss Addams may deny her association with anything Russian and yet she allowed her name to be used in an advertisement in my possession of the R. A. I. C. (Russian American International Corporation) along with its founders of which she was one, namely, Nicholas Lenin, Eugene Debs, Wm. Z. Foster and certain other communists. Recently Miss Addams protested vociferously against the Japanese exclusion act passed by Congress and signed by the President.

No doubt you are saying "Why attack Jane Addams? She has done so much good at Hull House." Miss Addams *has* done a great deal of good in her life time but it seems a pity for her to have gone so far afield now by openly declaring herself for the disarmament of the country which gave her birth, the chance to develop and the right of protection under its flag. There are many who believe that while Miss Addams was trying to Americanize the Russian at Hull House the Russian was Russianizing her. I think this is a correct assumption.

I consider Miss Addams the most dangerous woman in America because of her entrenchment behind the work she has done at Hull House. She has become very powerful in a wrong direction. Her influence with women's organizations has caused her to wave the flag of non-resistance over them and to add to their collection of banners a streamer bearing the words "No More War!" Many women's organizations have taken up her cry for "No More War!" and her advocacy of international entangling alliances. She has denied that she has signed the Slackers' Oath and yet continues to associate with those who have, which leads me to believe that she at least has given it her tacit approval. For years she has been associating with many of the world's worst citizens. This leads me to conclude that as an American she is ashamed of her country and would prefer that Russian radicals take over the reins of state and run the United States.

Various women's organizations, because they back Miss Addams' stand for pacifism, are becoming a menace to this country. Thus far "The Federation of Women's Clubs" has kept aloof from Russian propaganda, which has added to their strength because of their loyalty to American ideals. The heads of this mighty organization of women have seen the danger of Russian propaganda.

Northwestern's "38," it is reported, took the Slackers' Oath, thereby pledging themselves never to raise their hands in protection of their country. I glory in the fact that in event of war they will be called, or better put, drafted. If they refuse to support the government, they will be handled as all slackers and traitors should be. Bergdoll and Benedict Arnold are the gods of those who believe in non-resistance and who approve the teachings of Lenin and Trotzky. Certainly the teachers of the Red doctrine have reason to be proud of what they have accomplished. An emasculated manhood and womanhood is their dream of America.

With the aid of the agencies I have mentioned they are making every effort to succeed. In an editorial recently published in the Chicago *"Tribune,"* called "Pacifica Praecox," an accurate description of the pacifist appears. The editorial reads as follows:

"PACIFICA PRAECOX."

"According to Prof. Usam Erican, pacifism is a subconscious feminine complex; a state of mind rising from a distaste for the male of the same race. The woman pacifists propose to weaken the war-like qualities of the males so that another race will conquer them and afford more agreeable, if more dominating, companionship to the the pacifist females. He instances Trojan wives contented as the concubines of Greek warriors; women of decadent Rome seeking matrimony with uneducated Goths and Vandals; Aztec and Peruvian princesses betraying their countries to the Spaniards.

"On the other hand, he claims no trace of any such movements can be found among the virile races—the early Greeks, the Roman Republic governing the world, the Normans conquering and reorganizing Europe, the Elizabethan English, or the early Americans exploring and opening a new continent.

"Pacifism among males is confined to those individuals partially duosexed—men of female temperament recognizable by their voices, appearance and coquettish manners. He calls pacifism a 'psychological illness" and believes that 'institutions should be provided for the segregation and treatment of these unfortunates.'

"It may be some time before the community will act upon this wise suggestion. In the meantime it should hasten to exclude pacifists from any activities in which they can spread their dementia among the young. Especially should they be excluded from such positions as school teachers, college professors, and editorial writers. They are mental typhoid carriers and should be separated from the healthy population."

Our schools, colleges, and universities are rapidly becoming centers for the extension of Red propaganda. Many school principals and teachers are collecting money for various "relief funds" purporting to be for the aid of the starving in Soviet Russia. These funds, in many instances, remain in this country to support Red propaganda. Those who subscribe have their names put on the "sucker list," to receive from time to time literature of one kind or another urging the recognition of Soviet Russia and the disarmament of the United States. It is a known fact that Russian propagandists have over five hundred publications in this country which sell for from 1 cent to 25 cents. The A.B.C. of Communism, which is a large book, sells for 35 cents. When a citizen of the United States seeks literature of an opposite kind to refute statements made by pacifists and agents of the Third International, he is confronted with a price for his material that is almost prohibitive. Most books that are against Russianism with

all that it stands for sell for from $2.00 to $5.00, thus making it impossible for the majority who should read them to purchase them because of their price. This is wrong. These books should be sold at a very nominal cost and should be broadcast.

All school children should be made to read "The Man Without a Country" and it should be widely disseminated throughout the land at a price so cheap that all might own a copy.

Truly, all of those who advocate pacifism and non-resistance are people without a country. They should be placed on an uninhabited island in the ocean to work out their own destiny with the hand of every man turned against them. Visitation to this island should be forbidden save for the purpose of adding to its numbers.

Emma Goldman, an ardent advocate of all those terrors for which Russia stands, was deported. She now is denouncing, in no uncertain language, the teachings of Communism. She calls the citizens of the United States who advocate Russian principles the traveling salesman of Russia. She, along with others, notably John Spargo, has recanted and now declares Socialism, with all its teachings, absurd and unworkable. Emma Goldman is now without a country. The United States deported her; she escaped from Russia, the land of her choice and birth, and now is like a hunted animal, fearing at all times the assassin's bullet.

Those advocating a policy of non-resistance state that by merely declaring such a policy possible and having it accepted by society all wars will cease; that peace will reign in all lands and that men and women will love one another. The visionary has always believed this but the practical, hard thinking economist knows to the contrary. He knows that as long as there are two men and one woman in the world there will be jealousy, linked with the desire for possession; this is a factor for the establishment of hate, which in every instance results in warfare. It is warfare even though only one individual is destroyed. Desire for the possession of woman on the part of man has caused him to seek to develop his physical and mental body over that of the other fellow to such a degree that when possession of her finally is accomplished he may be able to give himself an economic standing sufficient to enable him to care for her and provide comforts for her and the family he expects to rear. It is desire for possession, linked up with the knowledge that he must fight if he expects to live and provide food for his loved ones that they may live too, that is the factor behind all wars.

If biological forces were not constantly at war, one with the other, all life would cease to exist and the earth would become barren. I know that this statement will meet with opposition and yet who likes a quitter? We all admire the man or woman who is willing to fight for what they want.

Nations must live and the same factors that have been mentioned enter into the establishment of all governments. The weak, emasculated na-

tions of the earth are the prey of the stronger and eventually become their vassals. Those able to protect themselves and to maintain economic independence rarely are disturbed.

Nations, like humans, are ambitious to do all they can for their inhabitants, thus making for a better nationalism. A country without a well developed nationalistic spirit falls far short of what it should be.

Red propagandists are doing all in their power to destroy this spirit in the United States and if those now resisting national defense policies succeed, internationalism will replace all nationalist thinking. The United State will then become a party to all the hatred and intriguing of old world diplomacy, with its hypocrisy and chicanery. Cardinal Mundelein, on his return from Europe to Chicago, urged the people of this country to keep away from entangling alliances. All of the nations of the world are jealous of the United States and nothing would be more acceptable than to see it enmeshed with them in their schemes for power.

I have already pointed out that all European and Asiatic countries regard their nationalistic spirit as being a part of their religion. They only enter alliances for self protection. We need no such thing. Properly protected from invasion we are sufficient unto ourselves, economically, numerically, physically, and mentally. We are not dependent on other nations for supplies of any kind and at once are we the great outlet for old world products. Without America's generosity, Europe would suffer more than it has. Let us be generous and kind but let us forbid meddling from any outside source with our national policies. Let these policies be well defined and emphasized.

I have pointed out that our school system is honey-combed with Red propaganda. Many teachers believe that our histories should be revised, throwing into the background those heroes who fought for our country's development and who stood ready to give their life's blood if necessary. They would put no emphasis on the deeds of Washington, Grant, Lee, Funston or Pershing, on the part they played in making the United States the greatest of nations. They would take the Stars and Stripes out of all of the schools and would forbid, if they could, any deference being paid to it.

This condition in our schools is serious and needs thoughtful attention from loyal Americans.

This country soon forgets the hardships of war and the vast amounts of money it had to expend in order to prepare to fight after war was declared. Instead of always being prepared, Congress goes to sleep and forgets the great cost of unpreparedness.

The National Defense Act of 1920 is ample to cover our immediate needs except as it relates to a standing army. We need a larger armed force to protect ourselves in event of war. At present our Army is far too small. Pacifists declare that a standing army is not needed and stand for a policy of non-resistance. If they believe so firmly in non-resistance, why do they not advocate the abolishment of all laws, both civil and fed-

eral? Why do they not stand squarely behind a measure that would abolish police protection and the discharging of all policemen? Why do they not advocate the removal of all locks and locking devices from doors and windows? All this would be in logical keeping with what they already advocate and certainly would make their teachings more reasonable. Why, if they expect God to perform a miracle in the presence of an invading army, will He not perform one to protect the single individual from the hands of the thief or the murderer?

All red-blooded men feel a rush of pride to their hearts when mention is made of the heroes of the World War. If they are honestly proud of the accomplishment of our soldiers overseas, they should express themselves in no uncertain terms when pacifism tries to raise its head. Pacifists should be crushed and submerged by a society possessing courage enough to speak out loud for the protection of this country from the dangers of a non-resistant policy with its cry of "No More War."

If our country's honor is in danger, let us be proud to defend it as we would the honor of our mother. Our country, in a sense, is our mother. We have received protection at her hands and in return it is our duty to defend it with our lives if necessary.

Representative Clarence McLeod of Michigan on May 14, 1924, introduced a bill in Congress which is intended to prevent the mailing, displaying or distributing, in any way, of propaganda advocating the overthrow of government by violence to any law of the United States. It is contended that, under these provisions, advocating the forcible resistance to a war of defense would be a crime. It is alleged that this bill is aimed at Jane Addams, the Women's International League for Peace, and other slacker-oath, pacifist organizations. Congressman McLeod, beside having the right slant on legislation, is a veteran of the World War. Citizens everywhere should write their congressmen and insist on the passage of this bill. I pray for its adoption.

"Behold in our God we'll onward go
Assured of vict'ry o'er the foe;
His word our conquest can complete,
And lay the foe beneath our feet."

The Constitution of the United States is the "Holy of Holies" of this country. If you are a loyal citizen, you will fight to uphold its every word and to defend its good teachings the world over.

25 E. Washington St.,
Chicago, Ill.

DIAPHRAGMATIC HERNIA

CARL A. HEDBLOM, *M. D., Rochester, Minnesota*

Diaphragmatic hernia is a transdiaphragmatic evisceration of abdominal contents into one of the thoracic cavities. The defect in the diaphragm may be congenital or traumatic. The congenital form may be due to a failure of development of one or more of the embryonic anlage, or there may be developmental weak areas that later give way, much as in the case of inguinal hernia. To the traumatic type belong those hernias due to injury to the diaphragm, especially from stabs by sharp instruments, from gunshot, and from sudden greatly increased abdominal pressure due to the patient being run over, falling from a great height or being doubled over with violence. The differentiation of the congenital and the traumatic forms may be impossible, because congenital hernia may remain relatively symtomless for many years, and trauma may be only a contributory factor towards producing a hernia in a congenitally weakened area.

Diaphragmatic hernia is more common than is generally recognized. Failure to recognize it is due more to not keeping it in mind as one of the possibilities, than to difficulties in diagnosis. The symptoms are variable because of the great variation of hernial contents in different cases, and they may be inconstant in the same patient due to temporary more or less complete spontaneous reduction of the hernia. Pain, gurgling and borborygmus in the thorax, dyspnea and a feeling of fullness, are the most characteristic. The physical findings may be entirely normal. Tympany or dullness and sounds of fluid on auscultation are the most suggestive findings. The diagnosis rests on the demonstration of abdominal viscera above the diaphragm. A history of dyspnea and cyanosis from birth, or trauma, especially stab or gunshot wounds in the region of the diaphragm, even years before, are of much value, especially as an indication for roentgenologic investigation.

The diagnosis is rarely made without the aid of the roentgen ray. The roentgenogram may furnish evidence sufficient for diagnosis without the use of an opaque medium, provided the condition is kept in mind in routine roentgenographic examinations. The opaque meal or enema will demonstrate the hernia except in cases in which spontaneous reduction has occurred at the time of examination, or the hernial contents are very small, or the ring so constricted that the medium cannot enter the herniated stomach or bowel. Herniation of a solid organ only, except the omentum, is very rare.

Distinction must be made between diaphragmatic hernia, eventration of the diaphragm, pneumothorax, inflammatory conditions such as pleuritis, pulmonary abscess, subdiaphragmatic abscess, and neoplasms.

The treatment is surgical unless the symptoms are slight and there

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*Read before the meeting of the Mississippi Valley Medical Association, Hot Springs, Arkansas, October 9-11, 1923.

are definite contraindications to operation. The operative mortality in uncomplicated cases is probably now less than 10 per cent. Strangulation occurs in about 20 per cent of the cases and the mortality in such cases has been between 60 and 70 per cent.

The abdominal approach is indicated in acute cases with intestinal obstruction in which the diagnosis is uncertain, and in cases of parasternal hernia. The thoracic approach is indicated in those cases in which a positive diagnosis has been made and strangulation exists and in cases in which the roentgenogram shows the hernia opening to be posterior. In some cases combined laparotomy and thoracotomy may be necessary. In case of acute strangulation with general prostration preliminary enterostomy may be life saving.

The author reported twenty-three cases from the Mayo Clinic. Sixteen of the patients were males, and seven females. In seven cases the condition was congenital, in six traumatic; in ten a classification could not be made with certainty. The hernial opening was posterolateral in three, posterior in one, near the central tendon in one, esophagal in one, parasternal in three, and the entire diaphragm was absent in two. In four the site was not noted.

The stomach alone was herniated in one and with portions of the intestines in five. The transverse colon and omentum were herniated alone in three and with other hollow viscera in six. The small intestines were herniated in four, the spleen in three, and the tail of the pancreas in one. Fifteen of these patients were operated on for repair of the hernia, with three deaths; from the shock in one case, respiratory failure in one, and embolism in one.

DISCUSSION

Dr. Charles A. L. Reed, Cincinnati, Ohio: I wish to express my appreciation of this interesting and instructive paper. In all my surgical experience I can recall but one case of diaphragmatic hernia, and that turned out as a complication for gastroenterostomy. It was a case in which there was spontaneous reduction of the hernia at the time but it was not detected, and at the time the operation was done a part of the stomach itself was eventrated. In that case it was a simple matter to stitch up the opening, and I am glad to say with satisfactory results.

From my limited experience I am impressed with the fact that diaphragmatic hernia is a condition which should be brought to the attention of the general practitioner because in the presence of such characteristic symptoms as the essayist has recounted of this condition, it is important for him to think of the possibility of this condition.

Dr. Hedblom's record is a remarkable one, and I again extend my congratulations to him that he succeeded in getting away with no more than 20 per cent mortality in this extraordinary condition, because generally when these cases are brought for operation it is only because they are practically in extremis.

Dr. William T. Coughlin, St. Louis, Missouri: It falls to the lot of very few practitioners to see so many of the cases of diaphragmatic hernia as Dr. Hedblom has had, and he tells us the story of them in such a modest, unassuming, but none the less absolutely convincing manner. A real hernia of that kind I came in con-

tact with only once, while the traumatic hernias due to injuries of the diaphragm come into our service quite frequently.

I would like to ask Dr. Hedblom a question which bears on the medico-legal aspects of these cases. A person may have one of these hernias due to trauma, and yet no symptoms may manifest themselves for five or six years. Are there any points noticed at operation that would help out in deciding the question post hoc, ergo propter hoc, which one can use as an argument to the jury? It might be argued that the patient was quite all right before operation. Great stress may be laid on that, and it might be of some value to find out whether there are any other symptoms connected with the posttraumatic hernia between the time of the accident and the time of strangulation which calls for operation.

The case I came in contact with was discovered accidentally in the usual routine examination with the x-ray. In all cases of gross injuries the patients that come in are x-rayed as a routine. We found a young man with a lot of his viscera, stomach and colon in the left side of his chest without any symptoms.

I would like to ask Dr. Hedblom whether in any of these cases he has found any case in which there was an actual stretching of the peritoneum upon the undersurface of the diaphragm into the thorax?

Dr. Hedblom (closing): I do not want to create the false impression that these cases were all mine. I have operated on six recent cases. The other 9 of the 15 were operated on by other members of the surgical staff of the Mayo Clinic.

The question of the medico-legal aspect of the cases is one that is pertinent and difficult to answer. There is this to be said: if it can be brought out in the evidence that the diaphragm was injured by gunshot or by stab and a hernia should arise in that area, it would be pretty sure proof that trauma was the etiologic factor in the production of the hernia, even though it occurred many years afterward. There is abundance of evidence in the literature connecting the two as to cause and effect. There would be no difficulty in convincing a jury of that. If there is a protrusion of the omentum through a stab above the diaphragm, that is proof positive that there was injury to the diaphragm at the time. Hematemesis at the time of injury and the presence of a scar above the diaphragm would be good evidence of trauma being the underlying cause. Cases of diaphragmatic hernia following crushing injuries would be more difficult to prove to be due to the injury. In those cases the rent is apt to be large, and a history of mild symptoms for months or years before strangulation occurred would be suggestive of a traumatic origin. Cases of hernia occurring at the esophageal opening and the parasternal opening would probably be as difficult to prove due to trauma as is the case with inguinal hernia.

A sac was present in two of the cases of the parasternal hernia, but none of the others as far as I know. A sac is present in about 10 per cent of the acquired cases, and only in a very small per cent of the hernias of traumatic origin.

THE DIETETIC MANAGEMENT OF DIABETES*

FREDERICK M. ALLEN, M. D.

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I shall try to develop briefly three propositions:

I. Treatment by insulin and proper diet controls even the severest cases of diabetes.

II. Regulation of total calories and body weight retains its importance as the basic principle of diet.

III. Incorrect diets are dangerous in diabetes with or without insulin.

I. RESULTS OF TREATMENT BY INSULIN AND PROPER DIET.

We are now on the high tide of enthusiasm over the monumental discovery of insulin by Banting and his collaborators, and there will scarcely by any dispute of the statement that patients with the most severe and hopeless diabetes can by this means be miraculously restored in weight, strength, comfort and usefulness. Ourselves and others[1] have published abundant records of such cases, and a few of the photographs are reproduced here as examples (Figs. 1 to 8). Only the grossest mismanagement of diet can prevent these wonderful quick results. More important is the agreement of valid evidence to date that these benefits can be maintained apparently indefinitely.

Unwarranted optimism should be discouraged. Insulin is not a cure for diabetes. Remarkable gains of tolerance credited to insulin are generally explainable by failure to ascertain first the degree of improvement that could be achieved by diet alone. The few instances of genuine recovery of tolerance, beyond what is possible with diet, are best explained by the more thorough rest of the pancreatic function with diet plus insulin than with diet alone. Insulin is not even a magic preventive of progressiveness, for we have seen marked loss of tolerance in patients who were taking considerable quantities of insulin and at the same time excreting much sugar.

On the other hand, it is now fairly certain that diabetes is not an inherently progressive disease. The progressiveness observed in the past has been due chiefly to hydropic degeneration of islands, the result of functional overstrain entailed by incorrect diets, and to less degree by occasional injuries from intercurrent infections. I arrived at this conclusion some years ago on the basis of animal experiments, confirmed by experiences with human cases. If this view is not correct, and if there is an inherent progressive element in diabetes apart from functional injury, the outlook is still gloomy, because all cases of the severe or "progressive" type may still be expected to lose tolerance until they finally reach the stage of "total" dia-

*Address before the Mississippi Valley Medical Association, Hot Springs, Ark., October 10, 1923.

Fig. 1

Fig. 2

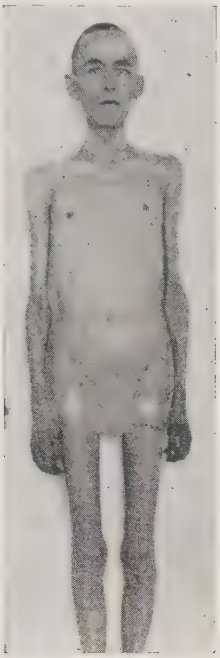

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

betes and must receive all their insulin from the outside. But the halting of progressiveness is now so much easier with the combination of insulin and diet, and will therefore be witnessed by so many more observers, that the traditional pessimistic view will doubtless soon lose its former dominance unless some real evidence is found to support it. Discarding this unsupported and exploded tradition of inevitable progressiveness, we may say that the most hopeful feature of treatment with a non-curative pancreatic extract is found in the fact that adequate functional relief of the pancreatic islands frequently permits some recovery of assimilative power, and at least suffices under any ordinary conditions to prevent any further impairment of tolerance.

II. REGULATION OF TOTAL CALORIES AND BODY WEIGHT

The announcement of the undernutrition treatment in 1914 attracted attention second only to that centered upon insulin today. The principle was actually revolutionary, for it was a conception that diabetes involves a disorder of total metabolism and a denial of the universal view that it is a disturbance of sugar metabolism alone. The mismanagement of the research and the obstacles which impeded its publication prevented this doctrine from being generally understood or accepted, and therefore the treatment itself has lately been attacked or abandoned to a great extent. The discovery of insulin in no way diminishes the importance of this principle. On the contrary, insulin furnishes a new means of demonstrating the validity of this principle and accordingly the nature of diabetes, and this fundamental conception of diabetes furnishes the means for the intelligent regulation of the use of insulin and for preventing dangers or failures.

The undernutrition treatment has meant a reduction of the body weight and metabolism to correspond to the reduced pancreatic island function. We have always agreed with our opponents who declared that they did not wish their diabetics to be undernourished and weak, but wished them to be plump and strong. The unfortunate fact is, however, that before the discovery of insulin there was no treatment that ever kept severely diabetic patients plump and strong, and therefore the only question was what treatment would keep them in the best condition for the longest time. Diabetic patients have emaciated and died not from lack of food but from lack of power to assimilate their food. Even the few who have literally been starved to death have been thus deprived only because they could assimilate scarcely any food if it were given, and their number is infinitesimal compared with those who have needlessly starved to death through the breaking down of their tolerance with quantities of food which they could not assimilate and could only excrete in the urine. I have published elsewhere[2] the photograph of a young boy as one example out of many to show that undernutrition is not synonymous with starvation. We have not starved patients unnecessarily, and when they have come with mild diabetes we have found that moderate reduction of diet and body weight has saved

them from passing into the severe stage. When they were already in a severe stage, the choice was unavoidable between reduction of diet sufficient to conserve their tolerance, and a higher diet which would break down their tolerance. We believe that those who have claimed to build up patients, by means of diets breaking down the assimilative power by which alone it is possible to maintain their nutrition, are in a theoretically absurd position, and this belief is confirmed by the significant silence of all such authors concerning their actual statistical results. Furthermore, few seem to have understood the principle which is so important in practice, namely that reduction of weight means raising of tolerance. Therefore, our initial undernutrition for the control of glycosuria and hyperglycemia, which has seemed so radical, has enabled us to give actually higher diets than otherwise possible for cases of this type while keeping symptoms under control. Our published statistics[3] show that in the long series of patients faithful to treatment in the Physiatric Institute, the merest handful have died either from the severity of their diabetes or from infections or other accidents; downward progress in the others has ordinarily been preventable; they have not only survived to receive the benefits of insulin but in the meantime have been reasonably comfortable and active; they have not reached the extremes of helplessness and misery experienced by those who have tried to avoid undernutrition and ignore active symptoms. The truthfulness of these statistical claims is attested by a sufficient number of witnesses, and these figures together with those of Joslin[4] prove that undernutrition has conserved not only life but also strength and comfort more successfully than any other plan of treatment.

The unfortunate feature of every diet treatment has been the emaciation and weakness of all severe cases. Now this is preventable by insulin, but with this new treatment precisely the same problems and disputes are encountered. First, there are numerous experiments to determine the carbohydrate equivalent of a unit of insulin. The results, which are variable at best, are obtained only under arbitrarily fixed conditions. They may have some value or convenience under the particular conditions chosen, but they have no fundamental significance because they vary with the total nutrition and other factors. If insulin is related to total metabolism, it is obviously impossible to establish any fixed general definition of its potency in terms of carbohydrate alone.

Second, there is a whole crop of formulas for computing the highest caloric ration that can be given with the minimum of carbohydrate and protein while avoiding acidosis. These attempts spring from the old idea that only glucose requires consideration in diabetes. It is nothing but a pure theoretical assumption that quantities of carbohydrate, protein and fat which represent supposedly equal quantities of glucose affect the diabetic tolerance equally. This assumption is not only unproved but has been shown by our tests to be untrue.

Third, there is the ancient error of mysterious harmful properties in

protein, and the much more deep-rooted fallacy of the harmlessness of calories in the form of fat. Low carbohydrate, low protein, high fat diets have been carried to their logical extreme by Petrén[5], with results which have attracted much notice in Europe but are hopelessly below the standard in this country. Contrary to current suppositions, we have fewer points of difference with Newburgh and Marsh than with many other writers. We agree fully in the endeavor to keep not only the urine but also the blood sugar normal, and in the use of undernutrition not only at the outset but also throughout the course of severe cases. We believe that their clinical success has been due essentially to this use of undernutrition, in a series of cases which were distinctly milder than our own series. The use of a high proportion of fat is entirely compatible with restriction of total calories, and is altogether different from absolutely high fat rations, such as used in Europe. We must firmly deny, however, that fat in any quantities can be disregarded in its influence on the tolerance, or that fat ever facilitates the clearing up of glycosuria as compared with fasting or undernutrition. Also, we believe that this or any other return toward the old idea of a disturbance only of glucose metabolism and not of total metabolism in diabetes is a step backward and not forward in both theory and practice.

Fourth, this same consideration applies to all attempts to provide weight or strength for the diabetic by the use of alcohol, or of unusual or artificial food materials such as caramel, odd-carbon fats (intarvin), etc.

TABLE 1

		Case No. 574 — Diet				Urine	Plasma Sugar	Insulin	Body
Date		P. gm.	F. gm.	C. H. gm.	Cal.	dext. gm.	mg. per 100 cc.	Units daily	Wgt. lb.
September	9	60	10	16	394	0		2	21
	10-12	60	10	16	394	0		2	
	13	60	10	16	394	0	100	2	21
	14-18	60	10	16	394	0		2	
	19	60	10	16	394	0	126	2	22
	20-23	60	60	6	804	0		2	
	24	60	60	6	804	0		2	
	25	60	60	6	804	1.7		2	20
	26	60	60	6	804	3.7		2	
	27	60	60	6	804	8.2		2	20
	28	60	60	6	804	3.6		2	
	29	60	60	6	804	5.0		2	20
	30	60	60	6	804	6.2		2	
October	1	60	60	6	804	8.7		2	21
	2	60	60	6	804	10.1		2	
	3	60	10	16	394	7.1	254	2	21
	4	60	10	16	394	5.8		2	
	5	60	10	16	394	0		2	21
	6-13	60	10	16	394	0		2	
	14	60	10	16	394	0	159	2	21
	15	60	10	16	394	0		2	
	16	60	10	16	394	0		2	
	17	60	10	16	394	0		2	21
	18	60	10	16	394	0		2	
	19	60	10	16	394	0	100	2	21

TABLE 2
Case No. 989

Date		Diet P. gm.	F. gm.	C.H. gm.	Cal.	Urine dext. gm.	Plasma Sugar mg. per 100 cc. 7 a.m.	8 p.m.	Insulin Units daily	Body Wgt. lb.
September	1	60	115	30	1400		312		7	
	2	60	115	30	1400	Faint	200		7	36
	3	60	115	30	1400	0			7	
	4	60	115	30	1400	6.0	306	334	7	36
	5	60	15	40	535	5.3	306		7	
	6	60	15	40	535	1.9		366	7	36
	7	60	15	40	535	3.3	283		7	
	8	60	15	40	535	4.0		283	7	36
	9	60	15	40	535	4.8	250		7	
	10	60	15	40	535	4.8			7	36
	11	60	15	40	535	0	195	223	7	
	12	60	15	40	535	0			7	36
	13	60	15	40	535	0	157		7	
	14	60	15	40	535	0			7	36
	15	60	15	40	535	0			7	
	16	60	15	40	535	0	203		7	36
	17–18	60	15	40	535	0			7	
	19	60	15	40	535	0	126		7	36
	20	60	15	40	535	0		300	7	
	21	60	15	40	535	0	139		7	36
	22–23	60	15	40	535	0			9	
	24	60	15	40	535	0	137	260	9	36
	25	60	115	30	1400	0			9	
	26	60	115	30	1400	0			9	36
	27	60	115	30	1400	0		270	6	
	28	60	115	30	1400	1.4	226		10	36
	29	60	115	30	1400	Faint			12	36
	30	60	115	30	1400	Faint		200	14	
October	1	60	115	30	1400	Faint			16	36
	2	60	115	30	1400	0			16	
	3	60	115	30	1400	0			18	36
	4	60	115	30	1400	0	164		18	
	5	60	115	30	1400	0			18	37
	6	60	115	30	1400	0			18	
	7	60	115	30	1400	0			18	37

These endeavors of chemists must be forever fruitless, because based on a superficial and false conception of diabetes.

For details of experiments showing the influence of total calories and body weight upon diabetes and the insulin requirement, reference must be made to former publications[6,7]. A few examples are given here.

Table 1 shows normal urine and blood in a child on a diet of 394 calories. An increase of fat and decrease of carbohydrate, so as to make 804 calories, resulted in hyperglycemia and glycosuria, which ceased when the diet of 394 calories was resumed.

Another child in table 2 had gradually developed hyperglycemia and glycosuria on a diet of 1400 calories. The replacement of 100 gm. fat by 10 gm. carbohydrate, reducing the calories to 535, resulted in the clearing of these symptoms with the same dosage of 7 units of insulin. With a resumption of the 1400 calory diet, the insulin requirement was found to be 18 units per day even with hyperglycemia. Thus, the insulin

TABLE 3

Case No. 1073

Date 1922		Diet P. gm.	F. gm.	C. H. gm.	Cal.	Glycosuria gm.	Plasma Sugar mg. per 100 cc.	Body Wgt. lb.	Insulin units
November	11	40	10	24	346	0		112	4
	12	40	10	24	346	0		111	6
	14	40	10	24	346	0	195	110	6
	16	40	10	24	346	0	156	112	6
	17	40	10	24	346	0	182		6
	19	40	160	24	1696	0	195	111	6
	23	40	160	24	1696	††	312	112	6
December	1	40	160	24	1696	††	326	113	6
	10	40	160	24	1696	57.83	349	113	6
	12	40	160	24	1696	18.64		113	10
	14	40	160	24	1696	36.21	405	113	10
	17	40	160	24	1696	20.25			14
	21	40	160	24	1696	37.59		114	14
	23	40	160	24	1696	15.37			18
	27	40	160	24	1696	4.76	349	116	18
January	4	40	160	24	1696	10.69		118	20
	5	40	160	24	1696	8.93	306	116	20
	7	40	160	24	1696	11.00	349	116	22
	10	40	160	24	1696	20.49			24
	11	40	160	24	1696	18.80	385	116	24
	14	40	160	24	1696	5.77			28
	16	40	160	24	1696	†	319	119	28
	17	40	160	24	1696	0	246	120	28
	18	40	160	24	1696	0	238		32
	19	40	160	24	1696	0		120	32
	21	40	160	24	1696	0	200		32
	23	40	160	24	1696	0	206		32

TABLE 4

Case No. 1274

Date 1922		Diet P. gm.	F. gm.	C. H. gm.	Cal.	Glycosuria gm.	Plasma Sugar mg. per 100 cc.	Body Wgt. lb.	Insulin units
November	23	25	10	10	230	0	366	105	6
	26	25	10	10	230	0	234	105	6
	29	25	10	10	230	0	185	107	6
	30	40	20	10	380	0		109	6
December	2	40	20	10	380	0	112	111	6
	3	80	25	10	585	0	125	111	6
	4	80	25	10	585	0	102	114	6
	6	100	25	10	665	0		116	6
	7	100	25	10	665	0	62	116	6
	9	200	25	10	1065	0	87	115	6
	10	200	25	10	1065	0	112	109	6
	11	200	25	10	1065	0	175		6
	12	300	25	10	1465	0	203	111	6
	14	300	25	10	1465	0	230	113	6
	15	300	25	10	1465	0	238		9
	18	300	25	10	1465	0	92	114	9
	19	300	25	10	1465	0	175		6
	22	90	111	25	1465	0	209	112	9
	28	90	111	25	1465	0	178	111	9
	29	90	111	25	1465	0	209		9
January	1	90	111	25	1465	0	168	106	9
	3	90	111	25	1465	0		106	9

TABLE 5

Case No. 85

Date 1923	Diet P. gm.	F. gm.	C. H. gm.	Cal.	Urine *Sugar gm.	*T. N. gm.	*Plasma Sugar mg. per 100 cc.	*Body Wgt. lb.	Insulin units
Mar. 11–17...	60	151	100	2000	Traces		350	109	40
18-31...	60	262	100	3000	0		249	113	40
Apr. 1-3...	60	362	90	3860	0		160	114	40
4-11...	60	362	90	3860	9.8		303	116	30
12-30...	60	362	90	3860	0		268	120	33
May 1-5...	60	362	90	3860	15.0		397	125	33
6-8...	60	362	90	3860	17.1		469	125	36
9-10...	60	362	90	3860	21.1		652	125	40
11-12...	60	362	90	3860	25.7			125	44
13-15...	60	362	90	3860	22.6		416	126	48
16–17...	60	362	90	3860	22.0			128	52
18-19...	60	362	90	3860	26.8	3.7	429	129	54
20-22...	60	362	90	3860	38.5	5.3		130	60
23-26...	60	362	90	3860	40.4	6.9	455	130	66
27-31...	60	362	90	3860	19.2	6.1	357	131	75
June 1-2...	60	362	90	3860	28.1	6.9	326	133	80
3-9...	160	317	90	3860	60.3	13.1	437	135	80
10-13...	160	317	90	3860	33.7	16.5	500	137	90
14-19...	60	336	148	3860	45.3	8.3	441	139	90
20-26...	60	336	148	3860	42.3	5.7	429	141	100
27-30...	60	336	148	3860	74.5	6.2	484	143	120
July 1-7...	60	336	148	3860	42.9	5.8	600	144	120
8–14...	60	336	148	3860	20.5	5.6	422	147	140
15-18...	60	336	148	3860	23.9	5.7	357	149	140
19-Aug. 4...	160	317	90	3860	45.2	17.5	443	153	140
5-19...	60	336	148	3860	71.5	7.9	455	159	140
20-29...	60	136	148	2060	43.4	7.1	410	160	140
30-Sept. 4...	60	157	100	2060	13.8	7.4	366	159	140
5-20...	60	180	50	2060	8.5	8.1	381	158	120
21–24...	60	80	60	1200	5.6	9.7	295	155	90
25-30...	60	80	60	1200	6.5	9.5	258	154	80
Oct. 1-2...	60	80	60	1200	4.7	13.4	300	153	80
3...	60	80	60	1200	4.7	12.9		152	70

*Average.

requirement on the higher ration was between two and three times as much as on the lower one.

In table 3 there was hyperglycemia without glycosuria on 346 calories and 6 units of insulin daily. The fat intake was increased by 150 gm. without changing the protein or corbohydrate, and the resulting glycosuria was controlled only by an increase of insulin to 32 units daily. This increased requirement is out of all proportion to any glucose content attributed to the fat under any theories now prevalent in this country.

In table 4, as in the preceding ones, the plasma sugar figures are those obtained mornings before breakfast. This patient on his diet of 40 gm. protein, 10 gm. carbohydrate and 380 calories began to develop hypoglycemic attacks in the evenings. The attempt was made to control these by increasing the protein to 100 gm. and 200 gm., but they continued until the protein was raised to 300 gm. Here the insulin was increased to 9 units daily, but this extra requirement could readily be accounted for by

the simple increase of calories. To test this possibility, the protein was sharply reduced to 90 gm. on Dec. 22. The calories were kept the same, but the theoretical glucose value of the new diet was much lower than of the former one. The insulin requirement was not particularly changed. Protein therefore not only has no extraordinary glycosuric effect because of specific dynamic or any unknown influence, but actually shows less effect than anticipated from its theoretical glucose content.

Table 5 represents a prolonged experiment which is still in progress. The patient is a young physician with the severe "progressive" type of diabetes, whose tolerance has been accurately known and undiminished during the past four years. On the first diet of 2000 calories his insulin requirement was 40 units. An increase of fat to make 3000 calories apparently produced no change from March 18 to 31, so that from an experiment of this duration the fat might be regarded as harmless. In April, 100 gm. more fat was added, and 10 gm. carbohydrate was subtracted to allow for the theoretical glycerol of the fat. The first result was that the insulin dosage had to be reduced to 30 units daily to prevent evening hypoglycemic attacks, because the immediate effect of the carbohydrate withdrawal was so much greater than that of the fat addition. With the gradual increase of body weight came heavy glycosuria, in spite of a doubling of the original insulin dosage. An increase of protein from 60 to 160 gm. daily made no important difference. June 14, the extra protein was replaced by its theoretical equivalent of carbohydrate, keeping the total calories unchanged, and the glycosuria rose and persisted notwithstanding an increase of insulin to 140 units daily. By a repetition of these changes in August, the more powerful glycosuric influence of carbohydrate as compared with protein was confirmed. Nevertheless, the effect of the total calories was dominant. Aug. 20 to 29, the glycosuria fell to an average of 43.4 gm., as compared with 71.5 gm. in the preceding period, because of the subtraction of 200 gm. of fat without change in the protein or carbohydrate. In order to save time, a general reduction of diet has since been made, and with the reduction of body weight the insulin requirement has been reduced to 70 units. This experiment, which altogether will cover nearly a year of continuous hospital observation, will be published in greater detail when it is finished, but from the results of numerous other experiments I have no hesitation in predicting the outcome. We shall not reduce the weight to the original low level, but in proportion as we reduce it we shall reduce the insulin requirement. With a low body weight and low total calories, we shall be able to give 148 gm. of carbohydrate or 160 gm. of protein per day without creating a requirement for anything like 140 units of insulin per day.

As yet, nothing is known of the physiological-chemical role of insulin: whether it enters directly into the metabolism of all foods, or whether it is directly related only to glucose and other foods merely modify the utilization of glucose. As shown elsewhere[8], it is obvious that in brief experi-

ments the glycosuric effect of carbohydrate is greatest, of protein is intermediate, and of fat is least. We are still uncertain whether these differences will hold good after one or two years, or whether after a sufficiently long period the insulin requirement for a certain number of calories may be practically identical, irrespective of the kinds of food furnishing the calories. The chief point to emphasize is that the influence of fat is slow, but it gradually produces the traditional appearance of "spontaneous downward progress," so that more and more insulin is required to control glycosuria. With excessive fat rations, a condition is finally reached when the abnormally fattened patient can scarcely be kept free from glycosuria by any quantities of insulin that can be poured into him. Relief is to be found not in restriction to minimal quantities of protein and carbohydrate, but in suitable regulation of total calories and body weight. We shall still give most of the calories in the form of fat, because the sudden ups and downs of blood sugar resulting from excessive carbohydrate or protein are thus avoided. But in average cases comfort, strength and convenience are served by allowing in the neighborhood of 100 gm. carbohydrate and 100 gm. protein daily, and any excessive insulin requirement is avoided by restriction of fat and total calories so as to keep the body weight perhaps 5 or 10 pounds below the full normal.

III. DANGERS FROM INCORRECT DIETS

Glycosuria and hyperglycemia are abnormalities. They can be prevented, especially in severe cases, only by carefully weighed diets and equally exact regulation of insulin dosage. These precautions are inconvenient for both physician and patient, but it is a question whether there can be any plan of using insulin which will make a combination of careless diet and sugar excess permanently safe.

Theorizing on this subject is not warranted. Granting that sufficient insulin dosage will for the time being keep a patient in apparent health regardless of more or less glycosuria, it is still necessary to consider the long-familiar dangers of diabetes, which may be classified chiefly as (a) infections, (b) vascular and organic changes, and (c) acidosis.

(a) Past experience with infections has established two facts. First, hyperglycemia and glycosuria create an abnormal susceptibility to all kinds of infections. They occur not only in severe cases but also in mild ones, in patients whose pancreatic function has enabled them to be both strong and obese for years without regard to diet or glycosuria. Second, our very severe cases, kept in a state of emaciation with normal blood sugar, have shown a remarkable immunity to infections and have healed their wounds perfectly after operations. Liability to infections, therefore, seems to be not governed by the insulin supply or state of apparent nutrition but to be connected strictly with the presence of excess sugar.

(b) Arteriosclerosis is probably demonstrable in every case past

middle age in which glycosuria has been present for ten years or more. Gangrene generally has a basis of arteriosclerosis, but there is a specific nutritive factor besides, shown by the usual response to treatment which reduces the sugar. Retinitis, cataract, neuritis, and deteriorations in many organs may be attributed either to circulatory trouble or to the direct nutritive abnormality. These disturbances also are not connected with the available quantity of insulin or the apparent nutritive state, for they are practically as frequent in mild as in severe cases, and they are halted or prevented by undernutrition, however extreme, which controls the sugar.

(c) Diabetics who are fattened by the aid of large doses of insulin seem to become peculiarly subject to acidosis from slight causes. Theorists may suppose that a certain insulin dosage will metabolize enough carbohydrate to prevent acidosis under any circumstances, but the fact is that with a tendency to acidosis insulin diminishes remarkably in its effectiveness and much larger doses are required, as shown in the treatment of coma.

We have endeavored to keep our patients strictly free from glycosuria and with plasma sugar as nearly normal as possible. This attempt has succeeded in the vast majority of cases, but a few patients have been careless or disobedient. There is already a plain difference between the two groups, which seems more than accidental. The sugar-free group have remained free from all accidents, except a few trivial colds which have passed off uneventfully. Practically the entire group with glycosuria and marked hyperglycemia are now included in the following list of deaths and complications, classified under the same three heads as above. The earlier details of most of these cases are given in our former publication.[1]

(a) Case No. 1047. Girl aged 3 years, at home on a diet of 55 gm. protein, 50 gm. carbohydrate and 1,000 calories, with 10 to 14 units of insulin daily. The case was severe, and glycosuria and hyperglycemia were frequent despite the parents' efforts. There was a middle-ear abscess, and the diet was reduced to 50 gm. protein, 35 gm. carbohydrate and 900 calories. The child is still rather fat at a weight of 34 lbs., and her sugar is controlled better but not perfectly. She has recently come safely through whooping cough.

Case No. 1372. Woman aged 57, admitted April 15, 1923, with diabetes diagnosed a year previously. She had had frequent boils besides other symptoms. She was discharged May 5, symptom-free on 75 gm. protein, 70 gm. carbohydrate and 2,000 calories, without insulin. By slight carelessness she allowed glycosuria to return the first of July, and during that month developed an infection of a finger with severe cellulitis of the hand, requiring multiple incisions and drainage. The condition was again controlled without insulin.

Case No. 3. Girl aged 15 when first treated in 1915, and free from important infections during undernutrition treatment since that time. With a height of 5 ft. 3½ in., she increased her weight by means of insulin from the former 80 lb. to 130 lb. At this weight, with a diet of 100 gm. protein, 100 gm. carbohydrate and 3,000 calories, she was taking 100 units of insulin per day and showing glycosuria most of the time. She developed at intervals an abscess from an insulin injection, a

middle-ear infection, and a severe tonsillitis. The attempt has been made to reduce her diet, weight and insulin dosage, but she is inclined to be careless.

Case No. 806. Girl aged 9, who had developed severe diabetes at 7 years. In 1923 she was treated with insulin, and up to August was sugar-free and in excellent health on 50 gm. protein, 50 gm. carbohydrate and 1,000 calories, with 36 units of insulin per day. She was not seen after that time, as the mother became discouraged with the tendency to evening hypoglycemia when the child was sugar-free, and found she could more conveniently be kept in apparent health by allowing glycosuria every morning, which was cleared up by the insulin given during the day. In September she had a severe middle-ear infection requiring paracentesis and attended by increased glycosuria. A few days later, a long-distance telephone message from the mother described symptoms of impending coma, and she was advised to continue the same insulin, and omit all food except carbohydrate. The coma symptoms disappeared within 24 hours, but the other ear became involved, and later there was a patch of infection in one lung. The fever was above 105° and the family physician considered removal to an institution unsafe. The infection seems finally to have been overcome but the diabetes is not yet under control.

(b) Case No. 1559. Woman aged 59, with diabetes diagnosed in 1908, and with loss of parts of several toes in successive attacks of gangrene since that time With a height of 5 ft. 6 in., her weight was 245 lb. at onset, and 170 lb. at admission, August 22, 1923. Her weight was then further reduced by a diet of 80 gm. protein, 40 gm. carbohydrate and 600 calories. With 15 units of insulin per day, she was constantly free from glycosuria but had plasma sugar always above 0.25%. After a month in this condition, blisters developed simultaneously at the ends of both great toes. The insulin was immediately increased to 27 units in order to reduce the hyperglycemia. One toe is healing but the other shows a superficial black area with the prognosis still in doubt.

Case No. 1576. Woman aged 56, height 5 ft. 4 in., weight 190 lb. in January, 1923. Diabetes was diagnosed after she had lost 30 lb. in the following six months. She was admitted Sept. 9, 1923, because of a swelling like an infected bunion on the right foot. On a diet of 60 gm. protein, 35 gm. carbohydrate and 600 to 700 calories she was free from glycosuria and the infection gradually subsided. The plasma sugar was never found below 0.24%, and recently the left great toe became red and blistered. Insulin was immediately increased to 27 units to reduce the hyperglycemia, and the toe is now healing rapidly.

These two cases are noteworthy as being the only ones in the history of the Institute in which anything like gangrene developed during the period of hospital care. It is also noticeable that they were being treated with both undernutrition and fair quantities of insulin, and were free from glycosuria. Before the discovery of insulin, we controlled hyperglycemia more strictly by more radical undernutrition, and these cases seem to show that carelessness regarding hyperglycemia is still not safe.

(c) Case No. 989 was described at length[1] as an example of an 8-year-old girl who was fattened beyond our usual custom, because of the safety afforded by the constant care of a skilled nurse. On a diet of 80 gm. protein, 125 gm. carbohydrate and 2,000 calories, she was almost constantly free from glycosuria for several months with 70 units of insulin daily. Glycosuria was then present for only two days, when the nurse telephoned a description of symptoms which were interpreted as hypoglycemia. As glycosuria at one time of day is compatible with hypoglycemia at another time, it was proposed for this attack to give added carbohydrate and omit an insulin dose. The finding of both heavy sugar and acetone in the urine, however, showed that the condition was actually the atypical form of

impending coma which is so frequent in such cases. A blood test showing high plasma sugar and acetone and low bicarbonate confirmed the diagnosis, and increase of insulin and a diet of pure carbohydrate cleared up everything promptly. Later it gradually became necessary to increase the insulin to 106 units daily to prevent glycosuria, at a weight of 65 lb. Therefore the diet was reduced to 1,500 calories without changing the protein or carbohydrate, and with a reduction of 3 or 4 pounds of weight the insulin requirement has again been brought down between 60 and 70 units per day.

Case No. 1341. Girl aged 6 years, diabetic since February, 1923. She was symptom-free on a diet of 50 gm. protein, 42 gm. carbohydrate and 840 calories, with only 4 units of insulin per day. The mother became careless, did not bring the child for tests, allowed glycosuria to develop, and finally brought her back in coma on Sept. 18. The coma required the administration of 185 units of insulin in the first 24 hours, and a permanent increase of dosage to 30 units per day has since been necessary.

Case No. 1350. Girl aged 15, with height 5 ft. 8 in., and weight 106 lb. She was discharged symptom-free, March 29, 1923, on 80 gm. protein, 80 gm. carbohydrate and 1,800 calories, with 8 units of insulin per day. The parents continued the treatment, but failed to prevent repeated violations of diet and never brought the child for tests. She died in coma Sept. 1

Case No. 229. Girl aged 8 years, severely diabetic since 1920, kept alive by intermittent undernutrition with departures from diet between. Her height was 3 ft. 7 in., and her weight 41½ lb. In April, 1923, she weighed 55¾ lb., on a diet of 70 gm. protein, 75 gm. carbohydrate and 1,900 calories, with 36 units of insulin per day. The parents were never careful in keeping her strictly sugar-free, as she looked the picture of health and they trusted the insulin to keep her safe. Heavy glycosuria was known to be present for a week or two at the end of June, and they planned to bring the child to the Institute within a few days when their vacation in Atlantic City was finished. She suddenly became unwell, and before the parents realized what was wrong was in deep coma. Death occurred thus on July 3 notwithstanding treatment with 250 units of insulin.

These cases show an extremely high proportion of dangerous or fatal accidents, with either low or high insulin dosage, with heavy glycosuria, slight glycosuria, or sometimes only marked hyperglycemia. Our experience therefore is in favor of maintaining the closest possible approximation to normal conditions by rigid accuracy of diet and insulin dosage. Institutional care is as much needed as ever for the thorough study of cases and instruction of patients.

All questions involved in the diet and the entire management must be settled by unbiased objective tests. Nobody in the world can decide anything by a mere expression of opinion for or against undernutrition or any other procedure. The whole literature of diabetes is inexcusably befogged with statements of mere impressions by supposed authorities, accompanied by garbled accounts of brief observations which appear to support their position, without any following up of these cases with subsequent reports of fatalities or other embarrassing events. We have reached a stage of metabolic study where definite proof is possible. Indefinite dicta are as much out of date as it would be for somebody to arise and remark ponderously, without any specific facts, that "from his wide clinical experience he

is convinced that typhoid fever is not caused by the Bacillus typhosus." The problems of a chronic disease require observations not only sufficiently exact but also sufficiently prolonged. They can be illuminated if everyone will record his experience fully and frankly, without regard to the effect upon himself or his previously expressed opinions. It is to be feared that the advocates of lax methods will not hold themselves to that strict standard. It is still more to be feared that a widespread misunderstanding and misuse of insulin will cause the initial benefits to be only temporary, so that the diabetic death rate, which seems already to have fallen, will later rise. This has been the history with undernutrition and with every other advance in treatment; the patients have not died so early, but they have died nevertheless. The same old dangers of acidosis and infection still exist, and they can be met only by the same rigid care in keeping diabetes under control. The essential difference introduced by insulin is that this result can be accomplished at a higher level of nutrition, and there is the further hope that a greater number of physicians will now be stimulated to learn and apply exact methods for the settlement of theoretical questions and for the practical care of patients.

CONCLUSION

The practical point which I have emphasized is the importance of total calories and the body weight in relation to diabetic tolerance and the insulin requirement. Increase of weight requires more insulin. Reduction of total diet and weight makes possible the complete control of symptoms without serious privations in carbohydrate or protein or excessive use of insulin. In our experience, patients with glycosuria or marked hyperglycemia are subject to various dangerous complications regardless of low or high insulin dosage. The treatment of diabetes has been improved but not simplified by insulin, and neglect of strict dietary care should be condemned.

DISCUSSION

I have regarded the blood sugar as the one trustworthy index of the diabetic condition, but not the actual cause of the susceptibility to either infectious or non-infectious complications. Animals which are flooded with sugar by repeated large injections, or which are robbed of large quantities of sugar by means of phlorizin, never show the inability to resist infection or heal wounds that is characteristic of totally depancreatized dogs. It would seem as though the impairment of diabetic nutrition involves a reduced ability of all cells of the body to resist infections or repair injuries or simple wear and tear. Therefore undernutrition, even to the point of emaciation, when it reduces the sugar improves the healing and resisting power remarkably and conduces to clearing up complications.

There is such gratifying harmony in the general views expressed that little discussion seems to be required. There have been some fears that the general profession would use insulin recklessly as soon as it became available, ignoring glycosuria and hyperglycemia and paying attention only to the immediate clinical improvement. It is encouraging to find that the importance of accurate diet and blood sugar control is so generally appreciated. A new era of success in diabetic treat-

ment will be achieved not only by the aid of insulin but also by the use of accurate laboratory and clinical methods.

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THE SURGICAL ASPECT OF DIABETES

By M. G. Seelig, St. Louis, Mo.

(Abstract)

Dr. Seelig's paper embraced a discussion of the fundamental importance of a knowledge on the part of the surgeon of basic facts underlying of diabetes. The chemistry of blood sugar, the general problem of body metabolism and the more detailed problems of ketonuria, and acidosis are of no less importance to the surgeon that to the internist.

From a surgical point of view, Dr. Seelig grouped diabetics into 3 classes as follows:

1. Those whose diabetes is a mere incident, the important lesion being unrelated thereto, for example, hernia, hypertrophied prostate or chronic appendicitis.
2. Those who suffer with gangrene.
3. Those who suffer from acute suppurative lesions.

The operative treatment of these three groups was outlined in detail, and then a detailed statement was made of both preoperative and postoperative treatment on diabetics.

DISCUSSION

Dr. John L. Tierney, St. Louis, Missouri: I congratulate the Associations upon having presented to it such an eminent array of authorities in regarl to this subject, and I would like to see a very wholesome discussion on the subject.

There are only one or two points I wish to call attention to, and one of these points was mentioned by Dr. Allen, and that is in all diabetics of ten years' standing there is evidence of a generalized arteriosclerosis. I would also like to accentuate the point brought out by Dr. Seelig that in diabetics of some standing there is evidence of renal impairment manifested by hypertension, manifested by albuminuria, and by the presence of casts, nitrogenous retention, which is indicative of impairment in other ways, Dr. Mosenthal to the contrary notwithstanding. It may be true that some cases of nephritis show a threshold

that is lower in our experience in our clinic. Most cases of diabetes of any standing show an elevated threshold and show other evidences of renal impairment of diabetes, but I treated diabetes before the days of insulin, and I thought blood sugar be made as a guide to the proper management of diabetes from the standpoint of diet and insulin therapy, because if in most cases of diabetes renal impairment is present the threshold is elevated and glycosuria is not a proper index to the administration of insulin or of treatment in general. This is important now because of the fact that men are being drawn into the use of insulin and are handling cases where blood sugar determinations are not plausible. The number of courses being given in the same determination of blood sugar should be made an integral part of the education that we give to men whom we train to handle diabetes. If we do not do that, there is going to be a mass of statistics furnished from different parts of the country that are unreliable, because the determinations of glycosuria are not the proper estimation of the hyperglycemia.

Another point of interest is the use of insulin in cases of mild diabetes. Dr. Allen has called our attention to lifting the load with the use of insulin, and Dr. Olmsted feels that diet is of great value if used in connection with insulin. The pancreas and islands of Langerhans are not overworked if the diet is properly regulated, but it seems to me, it is rational to believe that if diabetes is due to impairment of function of the islands of Langerhans, a good point in treatment is the administration of insulin and prompt recuperation if recuperation is possible.

Dr. David C. Walt, Little Rock, Arkansas: I wish to express my grateful appreciation to the authors of these papers. I have not used insulin in the treatment of diabetes, but I treated diabetes before the days of insulin, and I thought I might possibly add to this discussion by saying we may take off some of the weight by drainage from the bowels and skin.

The combination of diet I have used in the treatment of these cases has been without a single mouthful of meat, eggs, bread or other cereals and that class of food.

I remember one patient, a man, 58 years of age, who came to me in 1908 and was eliminating an usually large amount of sugar, too heavy for his size. He was very weak and was getting weaker. In his case I resorted to drainage by the bowels and skin, saw that he got the right nourishment and general care, and he afterward went back to his work and worked steadily at his business and did fairly well, improving each year for nine years, then another doctor (a relative) began giving him nitrate amyl and morphine so I quit.

I do not think we have appreciated the effect of proper nourishment in these cases in the past as much as we have of late. If we give the proper kind of food in large quantities we can increase the weight and strength of patients.

I have pictures of a man, 30 years of age, who came to Little Rock on the 19th of last August, who had been fighting tuberculosis for five years in a Denver hospital and Government sanitarium, and pronounced hopeless. He was under the best of Denver's tubercular specialists and I have a letter written as an affidavit acknowledging the man's condition. The man is an ex-soldier. He had been unable to turn over in bed for five months and was brought to me in this condition. He had been fed on heavy food consisting of meat, eggs and cereals. He has not had a mouthful of this class of food since coming under my care. I took him off of meat, bread, eggs, cereals and potatoes and he has gained 15 pounds, is much stronger and out to shows and other places, and it is a little less than 65 days since he came to Little Rock. We are not feeding these

patients to the physiological effect as much as we should. We are depending too much on calories and weights for our measurement of food.

Dr. Allen (closing on his part): In regard to the one point of the influence of blood sugar upon the physical powers, I have regarded blood sugar as one of the few indices to the patient's condition, but when it comes to the question of lowered resistance the actual cause is not known. Animals can be flooded with sugar by repeated injections, but it is shown by depancreatized dogs that if they lose an amount of sugar there is something in the dietetic state. It is something that has to do with tissue resistance. Apparently greater nutrition in diabetics means that every cell in the body has less blood than normal to resist injury or to repair any kind of wear and tear. It seems to be the essential element involved, and a high blood sugar is merely an index of that abnormality. Therefore, when we reduce the sugar at the price of extreme emaciation, the patient becomes able to heal his wounds and resist infection.

In other respects the views expressed seem to be so harmonious that little discussion is called for.

When insulin was announced to the profession I really had the fear that doctors everywhere would use it on a wholesale basis, giving insulin to make patients feel well.

The general attention that is being paid to blood sugar in the cure and control of diabetes is very encouraging and an index that the adoption of careful methods is going to mark a new phase of diabetic success largely with the aid of insulin but also by reason of these other agencies.

Dr. Olmsted (closing): I would like to say a word about the carbohydrates. Dr. Allen thinks it is a question of total calories. My work is based on diets between 1,200 and 2,600 calories, and most of them on 200 calories. I have fed no diabetic on 28 calories. The normal caloric diet of the average individual in America is 3,000 calories. You can see that we are practicing undernutrition in all diabetics, and I think that is of particular importance. There is a reason, it seems to me, for some of the figures to be given, for the reason that if we men who see a lot of diabetics and are studying the disease can go to the internist who has facilities for following blood sugar and adjusting the diet, and give him the same rules to go by, granting they are not absolutely correct, if we can give him something so as to put the patient on a reasonable diet who is having glycosuria with the fat excessive, he will know where to begin with the insulin dosage. These figures should be presented to the doctors at large, and for that reason these quantitative relationships are of great value to the man who is interested in diabetes.

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U. S. VETERANS' HOSPITAL No. 55

In the early pioneer days of this country Fort Bayard, New Mexico, was a necessity for the well being of American citizens in the southwest. Today Fort Bayard has been abandoned as an army post and is known as U. S. Veterans' Hospital No. 55, where tuberculosis beneficiaries of the U. S. Veterans' Bureau are cared for.

Lying in Grant County, New Mexico, at an elevation of some 6,510 feet, this hospital is situated in what is perhaps the best climate afforded by the North American Continent for the treatment of tuberculosis. Fort Bayard is steeped in the lore and tradition of the great Southwest about which many volumes of fiction have been written and about which many poems have been sung by the foremost writers of this and preceding ages.

When that part of the country was young, it was necessary for the Federal Government to furnish protection to the hardy pioneers who were pushing civilization Westward. The Indians were hostile and the economical development of Southwest New Mexico, then a territory, was exceedingly hazardous. By the time the 19th Century drew to a close, the necessity for the maintenance of an army command at Fort Bayard had practically passed, and it was not felt that this part of New Mexico was longer in need of armed protection. For this reason, the post became available for other purposes.

At this time the Surgeon General of Army was faced with the necessity of establishing a sanatorium where the personnel of the army could be sent for treatment for tuberculosis. In 1899 the Fort Bayard military reservation became an army general hospital, which was developed for the treatment of pulmonary tuberculosis and its complications. The hospital functioned in this manner until 1920, when it was taken over by the U. S. Public Health Service, and operated by this agency of the Federal Government for the treatment of veterans of the world war, until May 1, 1922, when, by executive order, it was transferred to the U. S. Veterans Bureau as a Veterans' Hospital.

The plant turned over has been added to in many respects, chief of which is the magnificent new 250 bed unit and mess hall which were completed at the approximate cost of three-quarters of a million dollars. A total of 1,000 patients can be cared for at this hospital. A hospital must have all modern conveniences. Therefore, U. S. Veterans' Hospital No. 55, in the middle of the desert, must have its own water supply which is piped some six miles from springs in the mountains. It must also have its own

public utilities, the same as any community. The hospital is protected by its own fire department. It has its own modern fire-fighting apparatus. Another feature of the Hospital is the farm and dairy.

The Hospital can boast of a physical equipment unexcelled by any other hospital. The welfare of the patient body at the hospital is the prime consideration of the Medical Officer in charge. A well organized dietetic department is in constant operation, and every effort is made to serve palatable and nourishing food. Various forms of amusement are furnished by the welfare organizations, and these agencies heartily cooperate and exhibit untiring efforts in the treatment program established at Fort Bayard. Cooperating in this work with Dr. Robert H. Stanley, the Medical Officer in charge, are the Red Cross, American Legion, Veterans of Foreign Wars, K. of C., Y. M. C. A., and the Sojourners Club.

HIGH TEMPERATURE AND HUMIDITY

That the human body, in a state of rest and in still air, can not endure indefinitely a temperature higher than 90 degrees F. with 100 per cent relative humidity, has been determined by Department of the Interior investigators at the Pittsburgh experiment station of the Bureau of Mines, cooperating with American Society of Heating and Ventilating Engineers. In the course of the tests, it was noted that the heavier and stouter men of the experiments, when subjected to uncomfortably hot temperatures, lost more weight than the lighter and thinner men, but as a rule could endure such temperatures for a longer period and complained less of the exhaustion which followed. Loss of weight in the subjects experimented with gradually increased with an increase in atmospheric temperature. Whenever the subject drank ice water he immediately gained in weight, and in all cases the subject, within 24 hours, usually regained the entire weight lost. Subjects who drank ice water freely after exposure to high temperatures felt no ill effects, tending to disprove the assumption that such action develops severe cramps.

It was found that the exhaustion and weakness following subjection of human beings to a very high temperature and humidity for a short period is not so severe as subjection to a moderately high temperature and humidity for a longer period.

The pulse rate, rather than the rise in body temperature, apparently determines the extent of the discomfort experienced by the subject. Subjects became very uncomfortable after the pulse rate exceeded 135 pulsations per minute, and complained of unbearable and distressing symptoms when the pulse exceeded 160 per minute. The highest pulse rate recorded was 184 per minute. Subjection to high temperatures and humidities produced no marked change in the respiratory rate.

The health, comfort, and efficiency of men engaged in the mining industry may be impaired. in some instances very seriously, by abnormal physical conditions of the mine air or by variations in its composition. This is true in some of the metal mines of the West where high temperatures with varying humidities are encountered. Physiological studies have been made by the Bureau of Mines in some of these mines showing the effects of various temperatures and humidities. As it is difficult to carry out studies on many controlled temperatures, it was thought best to make the present experiments in a laboratory and apply the results to the mining industry in so far as practicable. The experiments were part of a general cooperative study of the physiological effects of heat and humidity being conducted by the Bureau of Mines and the United States Public Health Service, cooperating with the American Society of Heating and Ventilating Engineers, at the Bureau of Mines experiment station, Pittsburgh, Pennsylvania.

The experiments were conducted in two fully-equipped chambers, insulated by cork board, designed to maintain air conditions at a desired temperature and humidity. The temperature, humidity, and air motion of each room may be controlled independently of each other. The air conditions are controlled by apparatus outside of the chambers, and entirely separated from them. Instruments for observing the body and surface temperatures of the subject, also for recording the rate of respiration and of the heart pulsations, and the apparatus for basal metabolism work are located in an adjoining room.

The oral temperature of each subject was registered by the one-minute clinical thermometer while the surface temperatures were recorded by means of thermo-couples in contact with the body, and connected to a potentiometer in an adjacent room by means of flexible wires. Surface temperature readings were taken without the knowledge of the subjects. A permanent record of the pulse was made on a smoked drum whenever desired.

In addition to counting the rate of respiration by an observer, the rate was also recorded at intervals unknown to the subject by means of an inflated tube strapped around the chest and connected by long rubber tubing to the kymographion placed in the room adjoining the chamber. The wave lengths were traced on smoked paper encircling the drum of the instrument.

While irrelevant to the present study, an attempt was made to determine the cause of the inflammation of the eyes of which workers in the industries so frequently complain. On a day when the eyes were normal, a small quantity of sweat, which had been collected during an experiment, was dropped in the eye. The conjunctiva almost immediately became inflamed and the eye felt sore. The sweat collected from the face seemed

less irritable to the eye than that collected either from the chest or arms. Sweat-bands were then applied to the forehead during the experiments, these preventing the sweat from falling into the eyes, and also preventing the inflammation. This proves sufficiently that sweat is the chief factor in producing the conjunctivitis which accompanies exposure to heat.

Details of these tests are given in Serial 2584, "Some effects on man of high temperatures," by W. J. McConnell and R. R. Sayers, copies of which may be obtained from the department of the Interior, Bureau of Mines, Washington, D. C.

FOOT AND MOUTH DISEASE

In view of the epizootic of foot and mouth disease in cattle in certain parts of California at the present time and the interference with travel and with the shipment of certain foodstuffs (including milk) as the result of the presence of this disease, Acting Surgeon General White of the Public Health Service was asked to discuss foot and mouth disease from the viewpoint of its possible danger to human beings.

"The disease," Dr. White states, "is an acute, highly contagious malady affecting chiefly cloven-hoofed animals, such as cattle and sheep. Animals suffering from foot and mouth disease have fever, followed by an eruption consisting of vesicles (small blister-like sores) occurring chiefly on the mucous membrane of the mouth and on the skin at the cleft of the hoof and less frequently on the udders and other portions of the skin. There is usually prolonged ill health and much wasting of the tissues.

"The germ which causes this disease has not been identified, but it is known that it occurs particularly in the exudate from the vesicles, in the saliva, and in the malk of infected animals, though it is not limited to these materials. It is readily destroyed by heat, such as the boiling or pasteurization of milk.

"Adult human beings are not very apt to contract the disease, but it is by no means rare among children.

"The question has been raised as to whether the disease in children known as 'impetigo contagiosa' may not be identical with foot and mouth disease in animals, but no one has as yet been able to answer this question either in the affirmative or in the negative. Foot and mouth disease is not very fatal in cattle, and apparently much less so in human beings, if at all. It does cause serious losses when cattle are infected, because of the interference with the sale of milk, the reduction of the quantity of beef produced, and also on account of the expense and inconvenience resulting from quarantines against infected districts."

ORGANIZATION OF A MEDICAL INTELLIGENCE BUREAU FOR THE HOT SPRINGS NATIONAL PARK OF ARKANSAS

Under the auspices of the Garland County Medical Society of Hot Springs, a Medical Intelligence Bureau has been organized for the purpose of placing before the medical profession of America a clearer and more exact knowledge of the therapeutic values of the waters of the Hot Springs National Park of Arkansas, in the treatment of diseases and conditions resulting from acquired or constitutional toxaemias, faulty metabolism and defective elimination. Colonel L. M. Maus, retired, Medical Corps, United States Army, has been appointed Intelligence Officer and placed in charge of the bureau.

An advisory committee, consisting of three members of the local medical society, also members of the American Medical Association, has been appointed to co-operate with the intelligence officer in the management of the bureau. Clinical and other professional information relative to the uses of the waters of the springs in the treatment of diseases will be conveyed to the medical profession of the country through addresses before medical societies and conventions, contributions to medical journals, and the distribution of appropriate medical literature on the subject. Members of the profession are cordially invited to correspond with the bureau relative to cases, which have not responded to treatment at home, and to the advisability of sending them to Hot Springs for a course of treatment.

Although Hot Springs is owned and controlled by the United States Government and has been used, with increasing popularity, for more than a hundred years, it is believed that there is a general lack of knowledge throughout the medical fraternity of the country relative to the healing and beneficial powers of the waters.

Recognizing the beneficial results of Hot Springs in the treatment of chronic rheumatism, arthritis and the various forms of chronic neuritis, more than forty years ago, the Government constructed the Army & Navy General Hospital here, where thousands of officers, enlisted men and veterans of the several wars have been successfully treated. Several years ago the Interior Department, at a cost of several hundred thousand dollars, constructed a public bath house for the poor of the country, where large numbers during all seasons of the year, are treated gratuitously regardless of race, color or sex, by medical officers detailed from the Public Health Service.

In a circular letter published under an Executive Order, as early as August, 1892, the Surgeon General of the Army informed medical officers that the waters of Hot Springs, Arkansas, had established a reputation in the treatment of certain diseases, and recommended that patients suffering from the following diseases and conditions be sent there for treatment: the various forms of gout and rheumatism after the acute inflammatory

stage; neuralgia, especially when depending upon gout, rheumatism, metallic or malarial poisoning; paralysis, not of central origin; the earler stages of locomotor ataxia; functional diseases of the liver; chronic skin diseases, especially the squamous varieties; chronic conditions due to malarial poisoning; infective arthritis, arterio-sclerosis, chronic nephritis and other cardio-rental diseases; selected diseases of metabolism (gout, diabetes, obesity, etc.); chronic gastro-intestinal diseases which have not responded to continued hospitalization at other places (gastro-neurosis, post-dysenteric colitis, chronic intestinal stasis, etc.). Clinical experience among the practitioners of Hot Springs has proven that these waters taken internally and employed in the form of baths have been very effective in the reduction of high blood pressure.

Every facility has been provided at Hot Springs for the care and treatment of the sick in the way of bath houses, hospitals, sanatoria, hotels and boarding houses. Among the twenty or more bath houses are a number costing from one to three hundred thousand dollars each, and contain the most modern equipment for the different phases of hydro-therapeutic treatment. The climatic conditions are excellent and favorable at all seasons of the year for taking the baths, and are especially so during the warm weather at which season skin elimination is more active.

Hot Springs is provided with an efficient medical staff, which measures up favorably with the profession throughout the country. They are not only required to pass a local federal medical board, but the state board of medical examiners, before allowed to practice and prescribe the baths. The physicians, as well as the bath houses, are under the control of United States authority through the Park Superintendent, who is an officer of the Public Health Service. Sanitary inspections of the bath houses are made daily and are kept in excellent condition.

The Hot Springs of Arkansas were set aside by Congress in 1832 as a "National Sanitorium for all time and dedicated to the people of the United States, to be free forever from sale or alienation." Frequent physiological and chemical examinations have been made of these waters by government experts, and at the present time the Secretary of the Interior has asked another appropriation for that purpose. Professor Boltwood in 1904 declared that the waters of Hot Springs, Arkansas, were strongly radio-active, and in 1913 Professors Hunt and Franklin of the National Research Council reported them, with few exceptions, to be as strongly radio-active as any European Springs. When the true therapeutic values of these waters become known to the profession of America, and the many erroneous and prejudicial opinions of a generation ago swept away, the Hot Springs National Park of Arkansas will become celebrated as the world's greatest health resort, and prove inestimable in the cure and relief of suffering humanity.

A Critical Examination of Psycho-Analysis. By A. Wohlgemuth, D.Sc. (London). New York, MacMillan Co., 1923. Octavo. 250 pages. $3.50.

Although the author's name suggests German origin, he is an Englishman. He has long been identified with psychological studies and is recognized as a leading mind in England. He asserts that he did not approach the subject in an unsympathetic attitude and at first was rather favorably impressed by the Freudian claims. Not until he attempted to penetrate the alleged reasoning and the application of this so-called psychoanalysis did he begin to look critically at the subject and realize its specious contention. He found that "nowhere in the whole of Freud's writing was there a shred of proof," only assertions of having proved something that was never done and mysterious reference to inaccessible and unpublished results. This was coupled with complete ignorance of the literature on the results of modern psychology and of the experimental method, and of logic.

The book opens with a brief view of psychology as it is understood by psychologists and a consideration of psycho-analysis as introduced and supported by Freud. This is followed by a consideration of dreams, symbolism, the Oedipus-complex, homosexuality, the psycho-analytic method and suggestions, forgetting, slips of the tongue, etc. In spite of the contention of the psycho-analysts, he points out clearly and shows conclusively that their results, insofar as they attain them, are based entirely on suggestion and even on command.

A certain amount of wit and humor in the discussion of certain topics adds to the interest if not to the weight of the argument, but it is apparently impossible to consider Freud's claims without an occasional smile; otherwise certain disgusting features would be absolutely intolerable.

The book is commended to all who are interested in the subject.

Differential Diagnosis. Presented through an analysis of 317 cases. By Richard C. Cabot, M.D., Professor of Medicine and Professor of Social Ethics at Harvard University, Volume 2. Third edition, revised. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, $9.00 net.

Cabot's Differential Diagnosis is so well known that any detailed description should be wholly unnecessary. To those unfortunate enough not

to possess a copy of this superexcellent book we may say the work consists of a description of a number of cases. The present Volume II consists of 317 cases, giving the examination in detail. First, the complete history, then the physical examination, examination of blood pressure, blood, urine, etc., then the discussion as to the diagnosis, with the final outcome in the recovery, operation or post-mortem. We know of no better method than this how to teach differential diagnosis. A large number of valuable tables are found throughout the book. In this edition while the number of cases have been unchanged, the discussions have been considerably modified or enlarged. Needless to say every physician should possess a copy.

Diseases of Middle Life. $15.00. The Prevention, Recognition and Treatment of the morbid processes of special significance in this critical life period. Comprising 22 original articles by various eminent authorities. Edited by: Frank A. Craig, M.D., associate director of the Clinical and Sociological Department of the Henry Phipps Institute of the University of Pennsylvania. In two volumes. Illustrated. Philadelphia. F. A. Davis Company, publishers. 1923.

This book is both unique and exceedingly interesting, and after reading a few chapters and looking up the references and the various headings, we are satisfied the profession will give this book well deserved recognition. The object of the work is best expressed by quoting from the author in his preface as follows: "The middle age period has been selected for special consideration because it is during this time of life that one notes the first appearance of many of those maladies which have the most important bearing upon the length of life of the individual and upon the efficiency and well being of old age. Nearly all of these diseased processes are most amenable to treatment during their early stages . . . There are numerous works dealing with old age and its peculiarities, etc., special features and proper treatment, but this work is based upon the belief that the arrest or cure of disease in its early stage is the only logical and rational base on which can be formulated any method for the prolongation of life or for rending old age an efficient and enjoyable period of existence instead of one of semi-invalidism, as is unfortunately so frequently the case." The two volumes before us are comprised of twenty-two original articles by eminent authorities who have been selected on account of their special training and experience, among whom we may mention a few such as Prof. E. J. G. Beardsley of the Jefferson Medical College; Clifford B. Farr, Medical Consultant, Department of Health; Prof. Julius Friedenwald of the University of Maryland; I. Chandler Walker of the Peter Bent Brigham Hospital; Prof. Joseph Sailer, University of Pennsylvania; Prof. George Morris Piersol of the University of Pennsylvania; Prof. James Huff McCurdy; Prof. G. A. L. Lockhard of McGill University; Prof. Frank V. Knowles, of Jefferson Medical College, and a number of other distinguished gentlemen.

Volume I covers the introduction by the editor, Frank C. Craig, most interesting chapters on diet, muscular exercises, occupation and diseases of middle life, such as diseases of the heart, diseases of the arteries, kidneys, respiratory tract, affection of ear, nose and throat, and a separate chapter on diabetes. Volume II contains chapters on gastric disturbances of middle life, diseases of the intestines, of the liver, gall-bladder and pancreas and of the male genito-urinary tract. Also chapters on gynecology, nervous and mental diseases, gout, obesity, skin diseases, diseases of the blood and diseases of the eye.

We consider these volumes essential to every progressive physician not only on his own account, where he will learn much in order to safeguard his own health, but also for the benefit of his patients who have reached middle age. We give these volumes our unqualified endorsement and hope they will have a very wide circulation indeed, as they so richly deserve. We certainly want to extend our thanks to Dr. Craig for having given the profession such vital aids in the management of the diseases of middle life.

Maternity Nursing in a Nutshell. $1.50. By Elizabeth H. Wickham, R. N., graduate of the Boston City Hospital, and Boston Lying-in Hospital Training School for Nurses; Former Supervisor of the Maternity Department. With 28 illustrations. Philadelphia. F. A. Davis Company, publishers, 1924.

This is a very practical little book of 150 pages intended primarily for the instruction of nurses who desire practical information about maternity nursing, particularly those whose knowledge is limited. The book is well arranged, has a number of new illustrations and is up to date—a ready reference book for those for whom it is intended.

Cosmetic Surgery. $4.00. The Correction of Featural Imperfections. By Charles Conrad Miller, M.D. With 140 illustrations. Philadelphia. F. A. Davis Company, publishers, 1924.

It is certainly a fact that the demand for cosmetic operations is becoming more prevalent, and most of us have seen in recent years some really wonderful results. It is a matter we think the general surgeon ought to consider more seriously, in view of the possibilities to do excellent work in this line with nerve blocking, etc. All the operations described in this book have been performed with local anesthesia and the subjects treated refer to such matters as folds, bags and wrinkles about the eyes, face lifting operations, operations for double chin, scowl lines, excision of scars, formation of dimples, operation for hub nose, correction of outstanding ears, etc. While these subjects do not appeal to the surgeon who no doubt considers them trivial, they are of vast importance to the individual so afflicted, and we believe that some of our younger progressive surgeons would do well to take up this line of work which is certainly most interesting and we may

add, most lucrative. The book before us is well illustrated and describes the necessary operations in detail.

THE TREATMENT OF THE COMMON DISORDERS OF DIGESTION. $4.75. A handbook for physicians and students. By John L. Kantor, Ph.D., M.D., Chief in Gastrointestinal Diseases, Vanderbilt Clinic, Columbia University; Associate Diseases, Vanderbilt Clinic, Columbia University. Illustrated. St. Louis. The C. V. Mosby Company, 1924.

Dr. Kantor has enjoyed exceptional opportunity as Chief of Gastro-Intestinal Diseases in the Vanderbilt Clinic of Columbia University, and the book before us, while by no means a treatise on the subject, gives in some odd two hundred pages a vast amount of valuable information in the general management of functional digestive disorders, the treatment of gastric and duodenal ulcer, the important subject of the treatment of delayed gastric emptying, some excellent chapters on the treatment of constipation, gall bladder disease and diarrheas. The illustrations are excellent and numerous and show the author also to be an accomplished roentgenologist. We commend this book most highly and trust it will have a very wide circulation.

MANAGEMENT OF DIABETES. $2.00. Treatment by dietary regulation and the use of insulin. A manual for physicians and nurses based on the course of instruction given at the Presbyterian Hospital, New York. By George A. Harrop, Jr., M. D., Associate in Medicine, College of Physicians and Surgeons, Columbia University and assistant visiting physician, Presbyterian Hospital, N. Y. Introduction by Walter W. Palmer, M. D., Bard Professor of Medicine. Paul B. Hoeber, Inc., New York.

This is a good practical book on the modern treatment of diabetes and the material given in this manual is based upon a course of instruction given to six hundred practicing physicians at the Presbyterian Hospital of New York during the summer months of 1923 rendered possible by a grant of money from John D. Rockefeller, Jr. It covers the best we know now on the treatment of diabetes, especially the dietary regulations and the use of Insulin. The chapters on insulin in acidosis and coma, the diet of the diabetic and recipes for the diabetic, with numerous tables on food value, are very useful indeed. Professor W. W. Palmer of Columbia University well says in the introduction: "In the development of recent therapeutic aids we are dealing in Insulin with a two-edged sword. When properly employed it is a great boon; when improperly used—a danger to the patient." This book teaches the physician when to use it, how to use it and when not to use it, and we cordially recommend it to our readers.

A Manual of Gynecology and Pelvic Surgery for students and practitioners by Roland E. Skeel, M.D., A.M., M.S., formerly associate clinical professor of Gynecology, Medical School of Western Reserve University, and Visiting Surgeon and Gynecologist to St. Luke's Hospital, Cleveland; Fellow American Association of Obstetricians, Gynecologists and Abdominal Surgeons. Second edition. With 281 illustrations. Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St.

This book is a practical handbook for students and general practitioners who desire to have a good working knowledge of gynecology. It is a very readable book, well illustrated, up to date, contains a very complete reference list at the end of each chapter covering all the recent progress in the subjects treated, giving the student an opportunity to improve his knowledge, if desired, as he goes along in the book. The present edition has been thoroughly revised, due prominence has been given to radium and roentgen ray therapy. We recommend this book cordially for the class of reader for which it is intended.

The Science and Art of Anesthesia. $4.75. By Colonel William Webster, D.S.O., M.D., C.M. Professor of Anesthesiology, University of Manitoba Medical School; Chief Anesthetist, Winnipeg General Hospital; formerly Professor of Practical Pharmacology. Illustrated. St. Louis. The C. B. Mosby Company, 1924.

Colonel Webster has given us an excellent book on Anesthesia, which, we trust, will have a very wide circulation. A professor of Anesthesiology, University of Manitoba Medical School, and Chief Anesthetist of the Winnipeg General Hospital, he has had vast experience as shown throughout the book. Only ten pages are devoted to local anesthesia, the purpose of the book being general anesthesia. It deals with the physiology of anesthesia—ether, chloroform, nitrous-oxide, ethylene, ethyl-chloride, and various indications, complications, etc., what to do and what not to do, and generally considers anesthesia an art. As the author well says: "To give an anesthetic is one thing; to practice the art of anesthesia is another." In other words—many are called but few are chosen. We cordially recommend this book to anyone directly or indirectly interested in the subject of anesthesia.

Modern Treatment and Medical Formulary. $5.00. A condensed and comprehensive manual of practical formulas and general remedial measures. Compiled by W. B. Campbell, M.D., formerly resident physician at the Methodist Episcopal Hospital of Philadelphia. Seventh revised and enlarged edition. By John C. Rommel, M.D., and C. E. Hoffman, Ph.M. Philadelphia. F. A. Davis Company, publishers, 1924.

On general principles, we do not approve of books on formulary as tending to carelessness and general inefficiency on part of the practitioner.

It must be admitted however, that this book has some points in its favor as it contains, in addition to the formulae, many practical and valuable clinical hints and many suggestions of value, as, for instance, in the articles on obesity, pneumonia, poisoning, goitre, diphtheria, bladder affections, and indeed, throughout the book. The fact that seven editions have been printed shows the need of such a book to many physicians and further, it may be conceded that the majority of physicians are not well versed in therapeutics, for some mysterious reason. This book is arranged alphabetically commencing with "Abdominal Operations" and ending with "X-Ray Burns." It contains some 700 pages, the present edition having been very much enlarged and many new formulas having been added. The prescriptions are in the old as well as the metric system. Many of the prescriptions are of the "gunshot" type and many are the favored prescriptions of leading practitioners. If intelligently used and not depended upon, we can see how it may be of value to the general practitioner.

THE SURGICAL CLINICS OF NORTH AMERICA (Mayo Clinic Number—April, 1924). The Surgical Clinics of North America (issued serially, one number every other month). Voume IV Number 11 (Mayo Clinic Number—April, 1924). 295 pages with 88 illustrations. Per clinic year (February, 1924, to December, 1924). Paper, $12,00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

The April, 1924, Number is the Mayo Clinic Number and as might be expected, of the very highest order. All the well known members of that clinic are among the contributors—Dr. Chas. H. and Wm. J. Mayo, Judd, Adson, Benedict, Williams, Russell Wilder, Balfour, Bowing, Stokes, Sistrunk, Lillie, Mann, Brasch, Henderson and many others. Among the numerous clinics, we may mention hypertrophy of the prostate, surgery of the kidney, cancer of the stomach, perforating duodenal ulcer, carcinoma of the rectum, surgical diseases of the abdomen, pseudo brain abscess, sarcoma of the humerus, etc. We take it for granted that every surgeon is a subscriber to these Clinics.

CANCER OF THE BREAST. $3.50. With a study of two hundred and fifty cases in private practice. By L. Duncan Bulkley, A.M., M.D. Senior physician to the New York Skin and Cancer Hospital, consulting physician to the New York Hospital. With forty illustrations. Philadelphia. F. A. Davis Company, publishers, 1924.

In spite of the fact that Dr. Bulkley is now in his eightieth year we must give him credit for being an inveterate fighter for what he believes to be correst, and so we have another book from his facile pen on the subject of cancer of the breast, giving his belief that such diseases may be treated successfully medically and not surgically.

Of course we all know that results at best are discouraging, no matter

what treatment is used. The reviewer also agrees with Dr. Bulkley that many of the so-called cured cases are not carcinoma but mistaken for such. In the writer's experience, covering over forty years of practice, every case of carcinoma, no matter how early they were operated on, died in a period of two years, with two exceptions—one case lived three years without any opration, and one four years with operation.

We, of course, also question the accuracy of the diagnosis in the cases of cancer of the breast which were cured by medical treatment and recovered, although we have not the slightest dougt that Dr. Bulkley honestly believes that there were true cases of carcinoma.

In conclusion, our hope remains that our research men keep diligently at work until they discover the true cause of carcinoma and show us the way to its successful treatment.

Fighting Foes Too Small to See. By Joseph McFarland, M.D., Sc.D., Professor of Pathology in the Medical Department of the University of Pennsylvania. Illustrated. F. A. Davis Company, Philadelphia. Price $2.50.

A most interesting popular book, to teach our citizens all about our invisible foes and how to combat them. It treats of the effects of micro-organisms, infection, transmission of the cause of disease from individual to individual, prevention of disease through increase of resisting power and the prevention of diseases whose micro-organisms are transmitted by insects. A number of excellent illustrations add to the value of this book. It teaches any intelligent reader all about the germ theory of disease, infection, Shick reaction, diphtheria carriers, typhoid carriers, vaccines, antitoxins and a thousand other useful things he ought to know in order to prèvent disease. We hope it will have an enormous circulation and thus give a death blow to Christian Science, Abrams, Chiropractors, and all other species of ignorance and quackery.

History of the War. An admirable work, just complete enough to be interesting to the average reader, accompanied by a second volume containing a splendid assortment of maps, explaining all the various battles of the war during the entire period on all fronts. There are 150 of these maps.

The text throughout is written in clear and simple style; that he who reads can readily understand. Only facts are given, no theories or fulsome flattery. In describing the basic idea of Foché offensive, he concludes: "It was that type of the offensive which brought the two greatest of modern wars to an end, i.e., the World war under the direction of Marshall Foch, and the American Civil war under the direction of General Grant." While primarily intended for military men, it can be readily understood and appreciated by any intelligent layman and is without doubt the best military history of the World war published in America so far.

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prompt and uncomplicated recovery almost always calls for the systematic use of an efficient restorative tonic—a preparation that will place the least possible burden on the digestive and assimilative functions of the body, but will at the same time supply the support so urgently needed by weakened and exhausted tissues.

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These books, edited by the National Health Council, are of the greatest practical value to the general public, consisting of brief monographs on many important topics. We have already reviewed the first ones issued, and the following booklets have just been received—viz: The Young Child's Health by Prof. H. L. K. Shaw of Albany Medical College; Food for Health's Sake, by Lucy H. Gillett, Supt. of Nutrition, N. Y.; The Human Machine by Director W. J. Howell of Johns Hopkins; Taking Care of Your Heart, by Dr. J. S. Hart; The Quest for Health, by James A. Tobey, M. D.

These excellent books are sold at the very low price of thirty cents each and can be given to any intelligent layman with lasting benefit.

Local Anesthesia, Its Scientific Basis and Practical Use, by Prof. Dr. Heinrich Braun Obermedizinalrat and Director of the KGL. Hospital at Zwickau, Germany. Translated and edited by Malcolm L. Harris, M. D., Prof. of Surgery, Chicago Polyclinic. Second American from the Sixth revised German edition. Lea & Febiger, Phil. & N. Y. 1924.

There is no better work on local anesthesia than Braun's well known book, translated and edited by M. L. Harris. This is the second American from the sixth revised German edition. It has 231 illustrations of superior merit and is the most valuable guide to all interested in local anesthesia. This edition is practically an entirely new translation as so much new material had to be incorporated and so much had to be rewritten, especially on lumbar and sacral anesthesia. It has our most cordial endorsement and we urge our readers to secure this book for an authoritative working manual.

Medical and Sanitary Inspection of Schools for the health officer, the physician, the nurse and the teacher, by S. W. Newmayer, A.B., M.D. Formerly chief of Division of Child Hygiene; assistant chief medical inspector, bureau of health; supervisor of school medical inspection, Philadelphia. Lea & Febiger, Philadelphia and New York, 1924.

The author is an authority on child hygiene and school inspection, and has given us the result of his experience, a splendid, practical authoritative, and most interesting work on these subjects. Everyone interested, whether physician or health officer, nurse, or teacher should read this book and keep it for constant reference. It covers administration, medical inspection, the school nurse, the school building and grounds, treats of communicable diseases, physical defects, the health of teachers, mentality (and the various tests) with a concluding chapter on rural school sanitation, child labor, etc. We give this book our unqualified endorsement and hope it will have the widest possible circulation.

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Personal.—Dr. Herbert A. Potts announces the removal of his offices to the Peoples Gas Building, Room 1448, 122 South Michigan Avenue. Practice limited to Oral and Plastic Surgery. Consultation, 1 to 2 p. m. Hours until 4 p. m. Telephone Harrison 3009.

Dr. John A. Hornsby, for several years superintendent of the Michael Reese Hospital, Chicago, has been appointed superintendent of the University of Virginia Hospital, Charlottesville.

Dr. Norman Bridge, formerly of Chicago, and donor of the Norman Bridge Laboratory, has subscribed $150,000 to the Southwest Museum of Art, Los Angeles.

Dr. Arthur I. Kendall, professor of bacteriology and dean of Northwestern University Medical School, has been appointed professor of bacteriology and hygiene at Washington University School of Medicine, St. Louis.

Vacancies in the Medical Corps.—There are now five vacancies in the Medical Corps of the Illinois National Guard, 33rd Division. The shortages are in Chicago units, The Medical Regiment and two Line Organizations. Ex-service officers will be given preference for these commissions. It should be recalled that officers and men of federalized units draw pay throughout the year. Anyone interested can communicate with Harry D. Orr, Colonel Medical Corps, Division Surgeon, 33rd Division, at 5 South Wabash Ave., Chicago, Suite 2010, telephone Rand. 0606, or call any Thursday evening, 3rd floor, 115 E. Ontario St., Headquarters Medical Regiment.

Chicago Orthopedic Club.—The next meeting of the Chicago Orthopedic Club will be held November 14, 1924.

N. W. University Receives $100,000.—Mrs. Robert L. Rea, 17 W. Huron St., Chicago, widow of the famous Dr. Robert Laughlin Rea, has given to Northwestern University medical school $100,000, with which to establish a permanent professorship in anatomy. Dr. Rea, who died in 1899, was one of the most renowned anatomists in the United States, and under his tutelage, at Northwestern University medical school, such leaders in their profession as Dr. Frank Billings, Dr. Archibald Church, Dr. Franklin H. Martin and Dr. William E. Morgan, received instruction.

Dr. Rea had a large private practice in Chicago thirty years ago and was the regular physician of many of the best known Chicago families. He was also a long-time personal friend of Dr. Robert Collyer, Joseph Medill, David Swing and Horace White. Although he taught anatomy at Northwestern, Rush Medical and the College of Physicians and Surgeons, over a period of forty years, he devoted much time to study and to travel, and was called by his biographers not only an inspiring teacher, but a research scholar of unusual brilliance.

The late Dr. William E. Quine, of Chicago, persuaded him to accept the professorship of surgery at the Chicago Medical College, which a few years later, was merged into Northwestern University merical school.

It is related that soon after Dr. and Mrs. Rea arrived in Chicago they rented an apartment over the drugstore of the late Dr. David R. Dyche, at State and Randolph streets, Chicago, and there first met William A. Dyche, now business manager of Northwestern University. Dr. Rea, for over thirty years, was surgeon-in-chief of the Pennsylvania Railroad company and was a contemporary of such famous medical practitioners as Dr. Christian Fenger, Dr. N. S. Davis, Sr., Dr. I. N. Danforth and Dr. Nichols Senn. Edited by Marie Vick Swanson.

CONSTIPATION is practically at the bottom of the great majority of ills to which the flesh is heir. Physicians realize that unless elimination is perfect the waste products remain in the body and auto-intoxication and its long list of accompanying disorders result.

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an eliminant, a solvent and a mild purgative, with the ability to cleanse the intestinal tract and thus aid in the restoration of metabolic equilibrium.

THE REMEDY is easy to take and it gives the desired results.

Sample and literature to the medical profession on request to the

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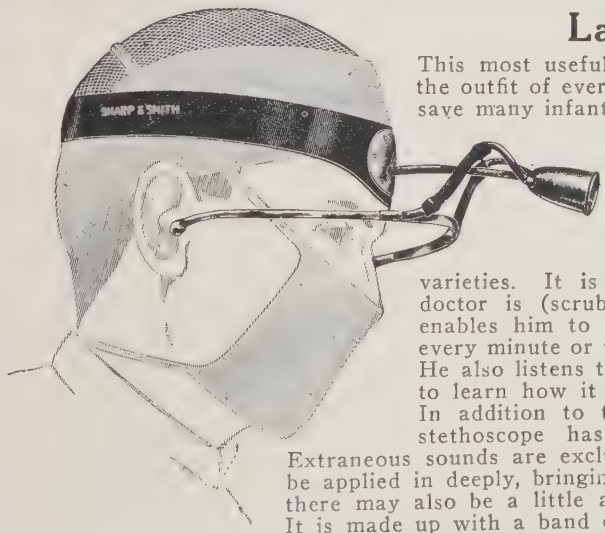
The De Lee-Hillis Head Stethoscope

Latest Model



This most useful instrument should be part of the outfit of every obstetric practitioner. It will save many infants' and mothers' lives.

It was designed especially for use during the second stage of labor of both (spontaneous and operative), but it is even more useful for all the purposes of a stethoscope than the usual varieties. It is worn on the head after the doctor is (scrubbed up) for the delivery and enables him to listen to the fetal heart tones every minute or two without infecting his hands. He also listens to the mother's heart frequently to learn how it is bearing the strain of labor. In addition to this great advantage the head stethoscope has valuable acoustic properties. Extraneous sounds are excluded; by pressure the bell can be applied in deeply, bringing it closer to the fetal heart—there may also be a little audition from bone conduction. It is made up with a band over the top of the head, with a circular fibre head band and, for easy portability, with a ribbon woven strap.

Price, $7.50 Each

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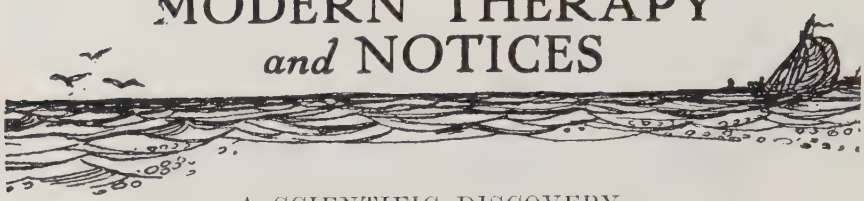
General Surgical Supplies

Est. 1844 **65 E. Lake St., Between Wabash Ave. and Michigan Blvd., Chicago, Ill.** **Inc. 1904**

MODERN THERAPY *and* NOTICES



A SCIENTIFIC DISCOVERY

Most people have the mistaken idea that sunburn is caused by "the heat of the sun." This is incorrect. Sunburn is caused by the ultra-violet rays, which constitute only seven percent of sunlight.

Nature herself provides a form of protection against the ultra-violet rays, for when a person is exposed continually to sunlight he will find that after several attacks of sunburn, the skin becomes tanned or freckled. Tan and freckles are simply the natural pigment which nature provides as a yellow screen through which the ultra-violet rays cannot pass and cause real injury by continued burning.

People with tender or fair skins will get severly sunburned many times before they can get the coat of tan or freckles, which serves as a yellow screen to keep out the ultra-violet or burning rays of sunlight.

Science, however, has come to the rescue of those who enjoy sunshine and the out-of-doors but who dread the pain and injury of sunburn or the disfigurement of a yellowish coat of tan or freckles.

This scientific discovery is based on the well-known fact that a substance as transparent as glass screens out the ultra-violet rays. One can be exposed to sunlight under glass for an indefinite period and get healthful, beneficent effects of the rays without being burned. The gardener grows his tender young plants under glass, where they thrive in the sunlight from which the ultra-violet or burning rays have been screened off by glass.

Research workers in the course of their laboratory investigations into the properties of ultra-violet light, have discovered a chemical which is as transparent as glass but which has the property of shielding the skin from the ultra-violet or burning rays of sunlight and thus giving absolute protection against sunburn. It performs exactly the same function as the transparent screen of glass or the yellow screen of tan or freckles. This chemical is said to be beneficial to the skin. Mr. E. B. Vliet, Research Chemist of The Abbott Laboratories, Chicago, in explaining the technical action of this new discovery, says:

"Radiation from the sun is classified as infra-red, visible, or ultra-violet according to the wave length. The infra-red portion consists of wave lengths greater than 0.75 micron (a micron is one one-millionth of a meter), and contains the heat waves. The visible portion includes all the waves visible to the human eye (between 0.75 and 0.39 microns), the longest waves being red and the shorter ones shading off through orange, yellow, green and blue to violet. The ultra-violet, containing all waves

Whole Grains as people like them

—*in confection form*

Puffed Wheat and Puffed Rice are whole grains, steam exploded to 8 times normal size.

They are airy as bubbles—crisp and flaky. Each giant grain tastes like a nut.

All the priceless food elements are there, every cell broken for easy digestion and assimilation.

Thus whole grains are transformed into confections which all enjoy. Children revel in them—morning, noon and night. And so do most grown folks, too.

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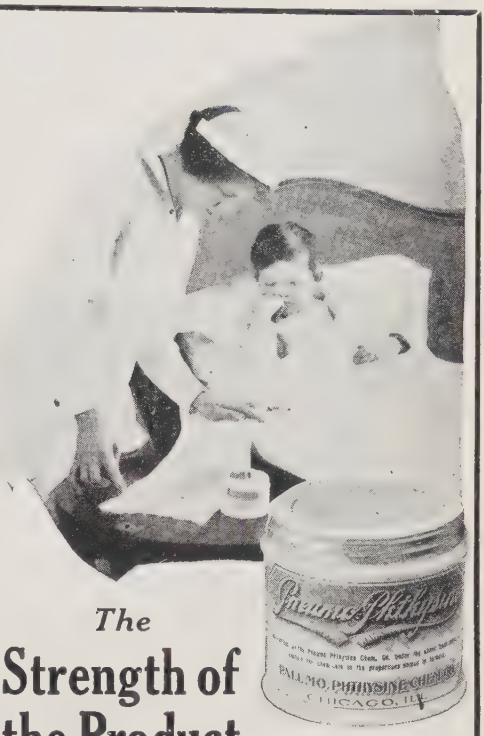
Quaker Puffed Wheat

Quaker Puffed Rice



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Scientifically correct, clinically proven, the formula which has given such uniformly excellent results in all febrile conditions that it can be regarded almost as a specific—

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holds a particular place in the estimation of all physicians who have used it.

Its dependability, reliability and uniformity make it the unfailing resource of the physician who wishes to get a fever temperature under immediate control.

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Creosote	13.02	Quinine	2.6

Methyl Salicylate 2.6

Glycerine and Aluminum Silicate, qs 1000 parts

Aromatic and Antiseptic Oils, qs

If you have not yet used PNEUMO-PHTHYSINE, you are depriving your practice of a valuable weapon. We shall be glad to send you, free of charge, a regular size jar for clinical test. Write for it to-day.

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Dept. C. M. R.

220 W. Ontario St. Chicago

shorter than 0.39 microne, is invisible to the eye and is the portion that is entirely responsible for sunburn, tan and freckles.

"When solar radiation strikes a body some of the waves are reflected, others are absorbed and some may be transmitted. Some substances, like lampblack, absorb nearly all of the waves. Others, such as window glass, transmit most of the infra-red rays, all of the visible but absorb nearly all of the ultra violet. Still others have a more selective absorption. A sheet of hard black rubber absorbs visible and ultra violet radiation but is transparent to infra-red. Red glass transmits only red and some infra-red, but absorbs all other waves, while blue cobalt glass transmits only blue and violet.

"In our search for a material that could be used to prevent sunburn and freckles, it was necessary to find a substance that would absorb all of the ultra-violet and transmit all of the other waves so that beneficial effects of exposure to the sun would be impaired. Furthermore, the substance had to be one that could be incorporated into a cream and thus applied to the skin in an invisible layer and be absolutely harmless.

"This search was greatly hastened by the instrument known as a quartz spectograph. In this apparatus there is a source of light rich in ultra-violet, a quartz prism to break up the light into its various wave lengths and a photographic plate to record the results, for in this work the human eye cannot be used. By putting various substances in the path of the light going to the prism, certain wave length waves are absorbed and in the spots where these waves would strike the photographic plate, a blank space results. Thus series after series of substances were quickly tried and a few were found that absorbed the ultra-violet waves completely, but let the others pass. These were tested further to determine their fitness in other respects and one was finally selected that was far superior to the others. This product is a synthetic organic compound with one of those long chemical names that serve to keep a haze of mystery about the otherwise very practical science of chemistry.

"However, for practical purposes, it is also known as sodium-sunex because of its ability to remove the ultra-violet from the sun's rays."

A USEFUL THERAPEUTIC AGENT

Anything which saves time, effort, and increases efficiency in the way of treatment, is well worth the consideration of the busy doctor. There are many cases in which it is necessary to employ local treatment, for which purpose the patient must come to the doctor's office. This holds true of various gynecological conditions, which, while they may be of minor importance primarily, should receive attention and require regular treatment. Excessive discharge, even if it does not amount to a true leucorrhea, calls for the use of astringents; and ulcerated or eroded cervix, a flabby, relaxed vaginal tract, endocervicitis, or an inflamed condition of the tissues, call for

4 Oz.—8 Oz.—5 Pints

Prescribed For 40 Years!

Tongaline

MELLIER — ANTI-RHEUMATIC ANTI-NEURALGIC

RHEUMATISM SCIATICA LUMBAGO
NEURALGIA HEAVY COLDS GOUT
INFLUENZA AUTO-INTOXICATION
EXCESS OF URIC ACID

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The proportion of calories, proteins and calcium is greater in oats than any other grain, authorities say. No other cereal ranks so high in these food essentials.

No other cereal so popular, thanks to Quaker, the oats dish de luxe. Flaked from the finest, plumpest grain, rich and full flavored. Only 10 pounds to a bushel meet the Quaker standard. That's why Quaker Oats is the ever welcome breakfast.

Quaker Oats

Just the cream of the oats

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GENUINE
GLUTEN FLOUR

Guaranteed to comply in all respects to standard requirements of the U. S. Department of Agriculture.

Manufactured by
THE FARWELL & RHINES CO.
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STANDARD SALINE
LAXATIVE

Samples on request

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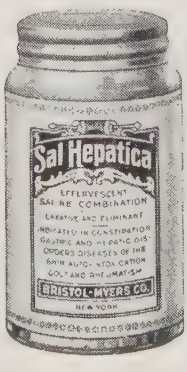

antiseptic, antiphlogistic, and toning-up applications. It is often difficult to relieve the intense discomfort caused by pruritus. Hence the steadily increasing use and popularity of Micajah's Medicated Wafers, an old and time proven combination of medicaments, which is the outcome of the efforts of an old time doctor to evolve a useful and dependable agent for such general use. The wafers are small, easily applied, prolonged in action, dependable in effect. They are markedly astringent, yet in no sense irritating. They exert styptic properties; they are antiseptic and soothing.

The physician who has used these wafers is prompt to express the opinion that they serve a most useful purpose, and it is well worth the trouble of any doctor who has not as yet become acquainted with the practical use of the wafers to write for a sample and literature to the makers, Micajah & Co., 143 Conewango Ave., Warren, Pa.

WELL WORTH THE EFFORT AND CARE

In using or prescribing Gray's Glycerine Tonic Comp., the practitioner will promote his patients' best interests and insure the results he seeks from this dependable restorative, by invariably specifying

℞ GRAY'S GLYCERINE TONIC COMP.

(Purdue Frederick Co.)

One Bottle

The use of "the original Gray's" means prompt, positive results and grateful, well satisfied patients, while the use of an imitation or substitute means failure—with all its dangers and disagreeable consequences.

The care and thought the physician puts into making sure his patients get "the original Gray's" invariably pays gratifying dividends.

TONGALINE

When the partially precipitated amorphous urates in colloidal form choke the capillaries, and we have rheumatism, neuralgia, sciatica, lumbago, and other allied disorders, also glandular inefficiency due to an impeded circulation, causing various local disturbances from the pressure of the distended vessels, the general practice is to prescribe some effective agent to ameliorate the symptoms and relieve the subjective sensation. Such drugs —usually one of the coal tar products—produce satisfactory results temporarily. This cannot well be otherwise, as they are all precipitants, simply liberating the urates out of the circulation into the surrounding tissues, whence they are again absorbed into the blood, there to reproduce all of the previous ill effects.

If, instead of some coal tar product, Tongaline be administered, there is an excessive excretion of urates, due to increased leucocytosis, and there is a relief of the acute manifestations. The alkalinity and consequent solubility of the blood being increased, Tongaline holds the urates in solution long enough to reach the kidneys, from whence they are eliminated entirely.

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THE Late Summer and Early Autumn Type of Hay Fever is caused by many of the common weeds, as—Ragweed, Russian Thistle, Sage Brush—the species differing widely according to locality. To assure specific treatment diagnostic tests are essential. To assure preseasonal treatment early diagnoses should be made—otherwise the less desirable, though often beneficial, coseasonal treatment will be involved. List of late flowering weeds, showing regional distribution and time of pollination, sent on request.

The Arlington Chemical Company
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—at its best

Food authorities rate oats as the most valuable of grain foods. No other cereal ranks so high in calories, protein, calcium.

Enjoyment of this great grain dish depends on quality—the quality of Quaker. Flaked from the finest oats grown—plump, full-flavored. Only 10 pounds to a bushel good enough. That's why Quaker Oats is everyone's favorite breakfast.

Quaker Oats
Just the cream of the oats

THERAPEUTIC TIP No. 6

HEMORRHOIDS, FISTULA, PROCTITIS, PRURITIS, CALL FOR THE USE OF SUPPOSITORIES, AT LEAST FOR PALLIATIVE ACTION AND EFFECT.

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ARE ANTISEPTIC AND ANTIPHLOGISTIC, ASTRINGENT AND STYPTIC, SOOTHING AND HEALING. ADDED TO THOSE AGENTS WHICH ENSURE THE EFFICIENCY OF MICAJAH'S MEDICATED WAFERS IN GYNECOLOGICAL TREATMENT ARE ADJUVANTS WHICH GUARANTEE THE ACTION AND EFFECT OF THESE SUPPOSITORIES. CONTAIN NO NARCOTIC OR HABIT FORMING DRUG.

Sample and literature—"Pioneers in American Medicine" on request.

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Two What?

"Bathing alone won't keep you clean,"
According to Doctor Frew;
So I guess I'll have to buy a tub
Made big enough for two.

—*Awgwan.*

Flaming Youth

Ed—"I am looking for a book that would interest a university co-ed."

Clerk—"Very sorry, sir, but we are out of that type just now. You see, we have already been raided twice this month."—*Whirlwind.*

Happened in Dr. McWay's Office

The sweet young thing had broken her glasses. She took the remains of them back to the optometrist. "I have broken my glasses," she said; "do I have to be examined all over again?"

The young optometrist sighed. "No," he answered, "just your eyes."—*Pipe Progress.*

A Responsive Chord

Betty. Brown, the prettiest girl in the village, was blessed with a father who snubbed all the young men who came to see her. One evening a bashful young man named Samuel Green called.

After the trio had sat together in silence for some time, the young man ventured to remark

"It looks as if it might rain, sir."

"It's not going to rain," was Father Brown's reply.

For nearly half an hour there was complete silence. Finally the old man's curiosity got the better of him.

"Who are you?" he growled.

"Samuel Green," was the response.

"What? Not old Tom Green's son?"

"Yes, sir."

"Well, then," exclaimed the father, thawing out, "it may rain, it may rain."—(Pittsburgh Chronicle-Telegraph).

Desperate Measures

In his announcement on a Sunday morning the vicar regretted that money was not coming in fast enough—but he was no pessimist.

"We have tried," he said, "to raise the necessary money in the usual manner. We have tried honestly. Now we are going to see what a bazaar can do."—Savannah News.

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INTERNAL REMEDIES

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bottles, each containing 2 micrograms radium element.
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Write for Literature.

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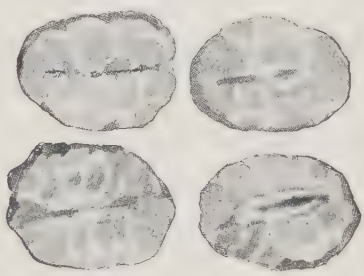

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ALWAYS a SOOTHING and CORRECTING influence

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For URETHRITIS—CYSTITIS—PROSTATITIS

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For collateral use in general practice to alleviate

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Write for literature and sample. *OD CHEM. CO., 59-61 Barrow St., NEW YORK*

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CACTINA PILLETS

A cardiac tonic that imparts tone to the heart muscle by improving its nutrition. Notably effective in the treatment of *Tachycardia, Palpitation, Arrhythmia, Tobacco Heart* and all *Functional Cardiac Disorders.*

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COMBINES the delightful qualities of effervescence with the well-known digestive properties of Peptenzyme.

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in gastralgia, nervous and fermentative dyspepsia, flatulence, atonic indigestion, and to relieve the gaseous fermentation that usually causes so much discomfort in digestive disorders.

It is palatable to the nth degree and gives the physician a cooling and refreshing beverage, free from any hint of medicine, yet pregnant with therapeutic value.

Converts the Distresses of Indigestion into a Smile

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An unexcelled sedative and antispasmodic in *Epilepsy, Uterine Congestion, Headaches, Alcoholism,* the *reflex Neuroses* and wherever the prolonged use of the bromides is called for.

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A potent stimulant to hepatic functions that does not produce active catharsis. Employed with gratifying results in *Biliousness, Cholangitis, Indigestion* and all conditions caused by *Hepatic Torpor.*

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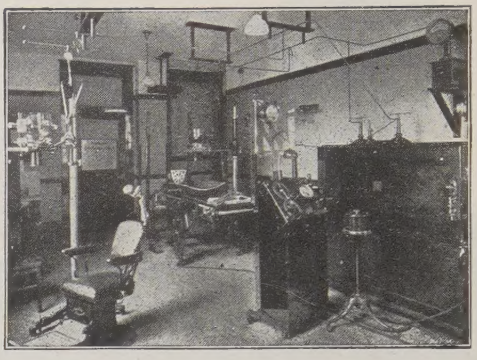

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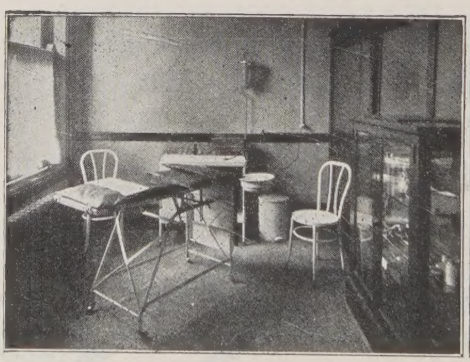

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The prudent practitioner, being guided by the dictates of experience, relieves himself from disquieting uncertainty of results by safeguarding himself against imposition when prescribing
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The widespread employment of the preparation in the treatment of anomalies of the menstrual function rests on the unqualified indorsement of physicians whose superior knowledge of the relative value of agents of this class stands unimpeached.
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Each HYPO-UNIT contains one accurately measured dose, and is sterile and completely assembled, ready for instant use.

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Desensitizing treatment, recommended for best results, should begin 4 to 8 weeks before attack is due, and 15 doses or more, of increasing strength, should be given. When the specific pollen appears in the air, doses should be greatly reduced.

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